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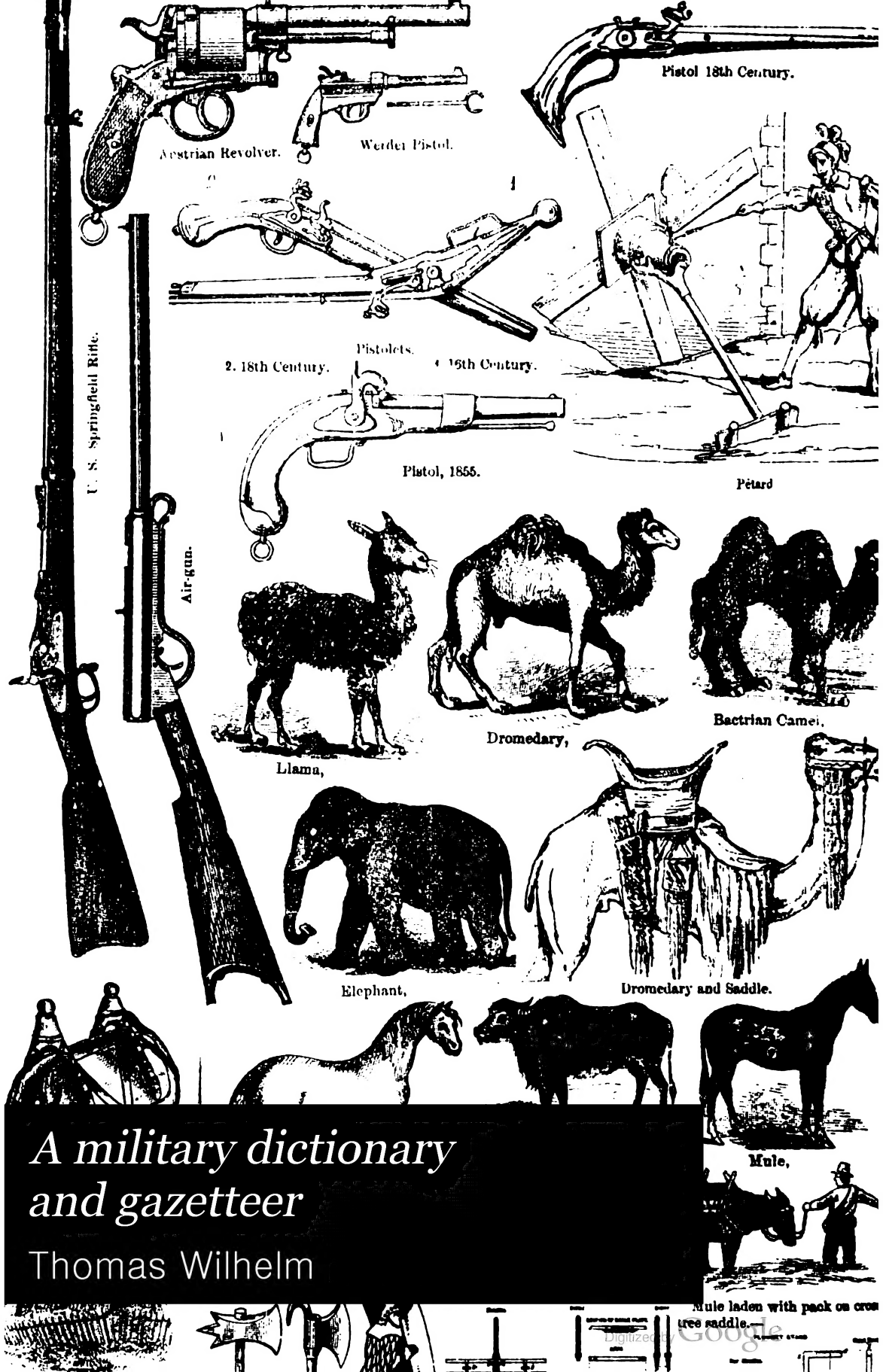
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Pistol 18th Century.

Austrian Revolver.

Werder Pistol.

2. 18th Century.

Pistolets.

19th Century.

Pistol, 1855.

Pétard

Llama,

Dromedary,

Bactrian Camel.

Elephant,

Dromedary and Saddle.

Mule,

Mule laden with pack on cross tree saddle.

*A military dictionary
and gazetteer*
Thomas Wilhelm

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A
MILITARY DICTIONARY
AND
GAZETTEER.

COMPRISING

ANCIENT AND MODERN MILITARY TECHNICAL TERMS, HISTORICAL ACCOUNTS
OF ALL NORTH AMERICAN INDIANS, AS WELL AS ANCIENT WARLIKE
TRIBES; ALSO NOTICES OF BATTLES FROM THE EARLIEST PERIOD
TO THE PRESENT TIME, WITH A CONCISE EXPLANATION OF
TERMS USED IN HERALDRY AND THE OFFICES THEREOF.

THE WORK ALSO GIVES VALUABLE GEOGRAPHICAL INFORMATION.

COMPILED FROM THE BEST AUTHORITIES OF ALL NATIONS.

WITH AN APPENDIX CONTAINING THE ARTICLES OF WAR, ETC.

BY
THOMAS WILHELM,
CAPTAIN EIGHTH INFANTRY.

REVISED EDITION.

PHILADELPHIA:
L. R. HAMERSLY & CO.
1881.

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TO

BREVET MAJOR-GENERAL AUGUST V. KAUTZ,

COLONEL EIGHTH REGIMENT OF INFANTRY, U.S.A.,

**BY WHOSE SUGGESTIONS, ENCOURAGEMENT, AND AID THE WORK WAS UNDER-
TAKEN, PERSEVERED IN, AND COMPLETED,**

THIS COMPILATION

IS, WITH RESPECT AND GRATITUDE, DEDICATED

BY HIS OBEDIENT SERVANT,

THE COMPILER.

PREFACE TO THE FIRST EDITION.

It is with no small degree of relief that the compiler of this work now turns from a self-imposed task, involving some years of the closest application, to write a brief preface, not as a necessity, but in justice to the work and the numerous friends who have taken the warmest interest in its progress and final completion.

It is inevitable that in the vast amount of patient and persistent labor in a work of this kind, extending to 1386 pages, and containing 17,257 distinct articles, there should be a few errors, oversights, and inconsistencies, notwithstanding all the vigilance to the contrary.

Condensation has been accomplished where it was possible to do so, and repetition avoided to a great extent by reference, where further information was contained in other articles of this book.

The contributions to the Regimental Library, which afforded the opportunity for this compilation, of standard foreign works, were of infinite value, and many thanks are tendered for them.

To G. & C. MERRIAM, Publishers, for the use of Webster's Unabridged Dictionary; J. B. LIPPINCOTT & Co., Publishers, Philadelphia; D. VAN NOSTRAND, Publisher, New York; Maj. WILLIAM A. MARYE, Ordnance Department, U.S.A.; Maj. W. S. WORTH, Eighth Infantry, U.S.A.; Maj. D. T. WELLS, Eighth Infantry, U.S.A.; Lieut. F. A. WHITNEY, Adjutant Eighth Infantry, U.S.A.; Lieut. C. A. L. TOTTEN, Fourth Artillery, U.S.A.; Lieut. C. M. BAILY, Quartermaster Eighth Infantry, U.S.A.; and Lieut. G. P. SCRIVEN, Third Artillery, U.S.A., the compiler is indebted for courteous assistance in the preparation of this volume.

OCTOBER, 1879.

PREFACE TO THE REVISED EDITION.

IN submitting this volume to the public it is deemed proper to say that the design of the work is to bring together into one series, and in as compact a form as possible for ready reference, such information as the student of the science and art of war, persons interested in the local or reserve forces, libraries, as well as the editors of the daily press, should possess. In short, it is believed that the work will be useful to individuals of all ranks and conditions.

The compiler has labored under some disadvantages in obtaining the necessary information for this volume, and much is due to the encouragement and assistance received from accomplished and eminent officers, through which he was enabled to undertake the revision of the first issue of this work with greater assurance; and among the officers referred to, Lieut. WILLIAM R. QUINAN, of the Fourth Artillery, U.S.A., deserves especially to be mentioned. It may not be out of place here to state that the compiler takes no credit to himself beyond the labor contributed in the several years of research, and bringing forward to date the matter requiring it, with such changes as the advance of time and improvements demand.

As it was thought best to make this work purely military, all naval references which appeared in the first edition have been eliminated.

MAY, 1881.

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 LÉGISLATION ET ADMINISTRATION MILITAIRES—M. Léon Guillaud.
 SUR LA FORMATION DES TROUPES POUR LE COMBAT—Jomfal.

IMPORTANT MAXIMS.

MISFORTUNE will certainly fall upon the land where the wealth of the tax-gatherer or the greedy gambler in stocks stands, in public estimation, above the uniform of the brave man who sacrifices his life, health, or fortune in the defense of his country.

Officers should feel a conviction that resignation, bravery, and faithful attention to duty are virtues without which no glory is possible, no army is respectable; and that firmness amid reverses is more honorable than enthusiasm in success.

It is not well to create a too great contempt for the enemy, lest the morale of the soldier should be shaken if he encounter an obstinate resistance.

It would seem to be easy to convince brave men that death comes more surely to those who fly in disorder than to those who remain together and present a firm front to the enemy, or who rally promptly when their lines have been for the instant broken.

Courage should be recompensed and honored, the different grades in rank respected, and discipline should exist in the sentiments and convictions rather than in external forms only.—*Jomini*.

An army without discipline is but a mob in uniform, more dangerous to itself than to its enemy. Should any one from ignorance not perceive the immense advantages that arise from a good discipline, it will be sufficient to observe the alterations that have happened in Europe since the year 1700.—*Saxe*.

If the first duty of a state is its own security, the second is the security of neighboring states whose existence is necessary for its own preservation.—*Jomini's "Life of Napoleon."*

A good general, a well-organized system, good instruction, and severe discipline, aided by effective establishments, will always make good troops, independently of the cause for which they fight. At the same time, a love of country, a spirit of enthusiasm, a sense of national honor, will operate upon young soldiers with advantage.

The officer who obeys, whatever may be the nature or extent of his command, will always stand excused executing implicitly the orders which have been given to him.

Every means should be taken to attach the soldier to his colors. This is best accomplished by showing consideration and respect to the old soldier.

The first qualification of a soldier is fortitude under fatigue and privation. Courage is only the second; hardship, poverty, and want are the best schools for a soldier.

Troops, whether halted, or encamped, or on the march, should be always in favorable position, possessing the essentials required for a field of battle.

Some men are so physically and morally constituted as to see everything through a highly-colored medium. They raise up a picture in the mind on every slight occasion, and give to every trivial occurrence a dramatic interest. But whatever knowledge, or talent, or courage, or other good qualities such men may possess, nature has not formed them for the command of armies or the direction of great military operations.—*Napoleon's "Maxims of War."*

MILITARY DICTIONARY.

A.

Aachen. See AIX-LA-CHAPELLE.

Aar. A river in Switzerland, flows into the Rhine opposite and near Waldshut, in Aargau. Prince Charles, while crossing the river, August 17, 1799, was repulsed by the French generals Ney and Heudelet.

Aarau. A city in Switzerland. Peace was here declared, July 18, 1712, ending the war between the cantons Zurich and Berne on one side, and Luzerne, Uri, Schuyz, Unterwalden, and Zug on the other.

Abad (*Abadides*). A line of Moorish kings who reigned in Seville from 1026 to 1090.

Abaisse. In heraldry, when the fesse or any other armorial figure is depressed, or situated below the centre of the shield, it is said to be *abaisse* ("lowered").

Abandon. In a military sense, used in the relinquishment of a military post, district, or station, or the breaking up of a military establishment. To abandon any fort, post, guard, arms, ammunition, or colors without good cause is punishable.

Abase, To. An old word signifying to lower a flag. *Abaisser* is in use in the French marine, and both may be derived from the still older *abeigh*, to cast down, to humble.

Abatement. In heraldry, is a mark placed over a portion of the paternal coat of arms, indicating some base or ungentlemanly act on the part of the bearer.

Abatis, or Abattis. A means of defense formed by cutting off the smaller branches of trees felled in the direction from which the enemy may be expected. The ends of the larger branches are sharpened and the butts of the limbs or trees fastened by crochet picket, or by imbedding in the earth, so that they cannot be easily removed. Abatis is generally used in parts of a ditch or intrenchment to delay the enemy under fire.

Abblast. See ARBALEST.

Abblast. See ARBALIST.

Abdivtes. A piratical people descended from the Saracens, who lived south of Mount Ida (Psilorati), in the island of Crete (Candia), where they established themselves in 826.

Abduction (*Fr.*). Diminution; diminish-

ing the front of a line or column by breaking off a division, subdivision, or files, in order to avoid some obstacle.

Abencerrages. A Moorish tribe which occupied the kingdom of Granada. Granada was disturbed by incessant quarrels between this tribe and the Zegrís from 1480 to 1492. They were finally extinguished by Abou-Abdollah, or Boabdil, the last Moorish king of Granada, and the same who was dethroned by Ferdinand and Isabella in 1492.

Abensburg. A small town of Bavaria, on the Abens, 18 miles southwest of Ratisbon. Here Napoleon defeated the Austrians, April 20, 1809.

Aberconway, or Conway. A maritime city of the Gauls in England, fortified by William the Conqueror, and taken by Cromwell in 1645.

Abet. In a military sense it is a grave crime to aid or abet in mutiny or sedition, or excite resistance against lawful orders.

Abgersate. Fortress of the Osrhoene, in Mesopotamia. The Persians took it by assault in the year 584.

Abii. A Scythian tribe which inhabited the shores of the Jaxartes, to the northeast of Sogdiana. They were vanquished by Alexander the Great.

Abipones. A tribe of Indians living in the Argentine Confederation, who were formerly numerous and powerful, but are now reduced to a small number.

Able-bodied. In a military sense applies to one who is physically competent as a soldier.

Ablecti. Ancient military term applied to a select body of men taken from the *extraordinarii* of the Roman army to serve as a body-guard to the commanding general or the consul. The guard consisted of 40 mounted and 160 dismounted men.

Abo. A Russian city and seaport, on the Aurajoki near its entrance into the Gulf of Bothnia. It formerly belonged to Sweden, but was taken with the whole of Finland by the Russians in the war begun by Sweden in 1741. By a treaty of peace concluded here in 1743 the conquered possessions were restored to Sweden. They were ceded to Russia in 1809.

Abolla. A warm kind of military garment, lined or doubled, worn by both Greeks and Romans.

Abou-girgeh. A city of Upper Egypt where the French defeated the Egyptians in 1799.

Aboukir (anc. *Canopus*). A village of Egypt on a promontory at the western extremity of the bay of the same name, 15 miles northeast of Alexandria. In the bay Nelson defeated the French fleet, August 1, 1798. This engagement, which resulted in a loss to the French of 11 line-of-battle ships, is known as the "battle of the Nile." In 1801 a British expedition under Sir Ralph Abercromby landed at Aboukir, and captured the place after an obstinate and sanguinary conflict with the French (March 8). Here also a Turkish army of 15,000 men was defeated by 5000 French under Bonaparte, July 25, 1799.

Aboumand. Village of Upper Egypt, near the river Nile, where the French fought the Arabs in 1799.

About. A technical word to express the movement by which a body of troops or artillery carriages change front.

Abraham, Heights of. Near Quebec, Lower Canada. In the memorable engagement which took place here September 18, 1759, the French under Gen. Montcalm were defeated by the English under Gen. Wolfe, who was killed in the moment of victory.

Abri (*Fr.*). Shelter, cover, concealment; arm-sheds in a camp secure from rain, dust, etc.; place of security from the effect of shot, shells, or attack.

Absence, Leave of. The permission which officers of the army obtain to absent themselves from duty. In the U. S. service an officer is entitled to 30 days' leave in each year on full pay. This time he may permit to accumulate for a period not exceeding 4 years. An officer, however, may enjoy 6 months' continuous leave on full pay, provided the fifth month of such leave is wholly distinct from the four-year period within and for which the 4 months' absence with full pay was enjoyed. An officer on leave over this time is entitled to half-pay only.

Absent. A term used in military returns in accounting for the deficiency of any given number of officers or soldiers, and is usually distinguished under two heads, viz.: *Absent with leave*, such as officers with permission, or enlisted men on furlough. *Absent without leave*; men who desert are sometimes reported *absent without leave*, to bring their crimes under cognizance of regimental, garrison, or field-officers' courts; thus, under mitigating circumstances, trial by general court-martial is avoided. Absence without leave entails forfeiture of pay during such absence, unless it is excused as unavoidable. An officer absent without leave for three months may be dropped from the rolls of the army by the President, and is not eligible to reappointment.

Absolute Force of Gunpowder. Is measured by the pressure it exerts on its environment when it exactly fills the space in which it is fired. Various attempts have been made to determine this force experimentally with widely different results. Robins, estimated the pressure on the square inch at 1000 atmospheres, Hutton at 1800, and Count Rumford as high as 100,000 atmospheres. While Rodman, by experiments upon strong cast-iron shells, verified the accuracy of Rumford's *formulas*, he found that his estimate of the force was greatly in error. According to Rodman the pressure is approximately 14,000 atmospheres. Dr. Woodbridge, another American philosopher and inventor, has shown that, fired in small quantities, the force of gunpowder does not exceed 6200 atmospheres. This agrees closely with the conclusion arrived at by the English "Committee on Explosives," 1875, who found that even in large guns the force did not exceed 42 tons.

Absorokas. A tribe of North American Indians. See CROWS.

Absterdam Projectile. See PROJECTILE.

Abydos. An ancient city of Mysia on the Hellespont nearly opposite Sestos on the European shore. Near this town Xerxes placed the bridge of boats by which his troops were conveyed across the channel to the town of Sestos, 480 B.C.

Abyssinia. A country of Eastern Africa, forming an elevated table-land and containing many fertile valleys. Theodore II., the king of this country, having maltreated and imprisoned some English subjects, an expedition under Lord Napier was sent against him from Bombay in 1867. On April 14, 1868, the mountain fortress of Magdala was stormed and taken with but little trouble, and Theodore was found dead on the hill, having killed himself. The country is at present governed by Emperor John of Ethiopia, who was crowned in 1872.

Academies, Military. See MILITARY ACADEMIES.

Accelerator. A cannon in which several charges are successively fired to give an increasing velocity to the projectile while moving in the bore. See MULTI-CHARGE GUN.

Accessible. Easy of access or approach. A place or fort is said to be accessible when it can be approached with a hostile force by land or sea.

Accintus. A word in ancient times signifying the complete accoutrements of a soldier.

Accolade. The ceremonious act of conferring knighthood in ancient times. It consisted of an embrace and gentle blow with the sword on the shoulder of the person on whom the honor of knighthood was being conferred.

Accord. The conditions under which a fortress or command of troops is surrendered.

Accoutre. To furnish with accoutrements.

Accoutrements. Dress, equipage, trappings. Specifically, the equipments of a soldier, except arms and clothing.

Accused. In a military sense, the designation of one who is arraigned before a military court.

Aceræ (now *Acera*). A city in the kingdom of Naples, taken and burned by Hannibal in 216 B.C. In 90 B.C. the Romans defeated under its walls the allied rebels commanded by Papius.

Aceræ. A city of the Gauls, taken by Marcellus in 222 B.C.

Achæan League. A confederacy which existed from very early times among the twelve states of the province of Achaia, in the north of the Peloponnesus. It was broken up after the death of Alexander the Great, but was set on foot again by some of the original cities, 280 B.C., the epoch of its rise into great historical importance; for from this time it gained strength, and finally spread over the whole Peloponnesus, though not without much opposition, principally on the part of Lacedæmon. It was finally dissolved by the Romans, on the event of the capture of Corinth by Mummius, 147 B.C. The two most celebrated leaders of this league were Aratus, the principal instrument of its early aggrandizement, and Philopemen, the contemporary and rival, in military reputation, of Scipio and Hannibal.

Achern. A city in the grand duchy of Baden, on the river Acher. Near this place a monument marks the spot where Marshal Turenne was killed by a random shot in 1675.

Acheron. A small stream in ancient Bruttium. In 330 B.C., Alexander, king of Epirus, was killed while crossing it.

Acinaces. A short sword used by the Persians.

Aclides. In Roman antiquity, a kind of missile weapon with a thong fixed to it whereby it might be drawn back again.

Acoluthi. In military antiquity, was a title given in the Grecian empire to the captain or commander of the body-guards appointed for the security of the emperor's palace.

Aconite. A poisonous plant. Several ancient races poisoned their arrows with an extract from this plant.

Acontium. In Grecian antiquity, a kind of dart or javelin resembling the Roman *spiculum*.

Acquereaux (*Fr.*). A machine of war, which was used in the Middle Ages to throw stones.

Acqui. A walled town of the Sardinian states on the river Bormida in the division of Alessandria. It was taken by the Spaniards in 1745, retaken by the Piedmontese in 1746; it was dismantled by the French, who defeated the Austrians and Piedmontese here in 1794.

Acquit. To release or set free from an obligation, accusation, guilt, censure, sus-

picion, or whatever devolves upon a person as a charge or duty; as, the court acquits the accused. This word has also the reflexive signification of "to bear, or conduct one's self;" as, the soldier acquitted himself well in battle.

Acquittance Roll. In the British service, a roll containing the names of the men of each troop or company or regiment, showing the debts and credits, with the signature of each man, and certificate of the officer commanding it.

Acre, or St. Jean d'Acre. A seaport town of Palestine (in ancient times the celebrated city of Ptolemais), which was the scene of many sieges. It was last stormed and taken by the British in 1840. Acre was gallantly defended by Djeddar Pacha against Bonaparte in July, 1798, till relieved by Sir Smith, who resisted twelve attempts by the French, between March 16 and May 20, 1799.

Acre, or Acre-fight. An old duel fought by warriors between the frontiers of England and Scotland, with sword and lance. This dueling was also called *camp-fight*.

Acrobalistes (*Fr.*). A name given by the ancients to warlike races, such as the Parthians and Armenians, who shot arrows from a long distance.

Acropolis. In ancient Greece, the name given to the citadel or fortress of a city, usually built on the summit of a hill. The most celebrated was that of Athens, remains of which still exist.

Acs. A village in Hungary on the right bank of the Danube, noted as the scene of several battles in the Hungarian revolution, that of August 3, 1849, being the most important.

Acting Assistant Surgeons. See SURGEONS, ACTING ASSISTANT.

Action. An engagement between two armies, or bodies of troops. The word is likewise used to signify some memorable act done by an officer, soldier, detachment, or party.

Actium (now *Azio*). A town of ancient Greece in Arcania, near the entrance of the Ambracian Gulf. It became famous for the great naval engagement fought near here in 81 B.C. between Octavius and Antony, in which the former was victorious.

Active Service. Duty against an enemy; operations in his presence. Or in the present day it denotes serving on full pay, on the active list, in contradistinction to those who are virtually retired, and placed on the retired list.

Activity. In a military sense, denotes attention, labor, diligence, and study.

Acto, or Acton. A kind of defensive tunic, made of quilted leather or other strong material, formerly worn under the outer dress and even under a coat of mail.

Act of Grace. In Great Britain, an act of Parliament for a general and free pardon to deserters from the service and others.

Actuarius. A name given by the Ro-

mans to officers charged with the supplying of provisions to troops.

Adacted. Applies to stakes, or piles, driven into the earth by large mallets shod with iron, as in securing ramparts or pontoons.

Adda. A stream in Italy. The Romans defeated the Gauls on its banks in 223 B.C.

Addiscombe Seminary. An institution near Croydon, Surrey, England, for the education of young gentlemen intended for the military service of the East India Company; closed in 1861.

Aden. A free port on the southwest corner of Arabia. It was captured by England in 1839, and is now used as a coal depot for Indian steamers.

Aderbaidjan (Fr.). A mountainous province of Persia, celebrated for raising the finest horses in the province for army purposes.

Adige (anc. Athesis). A river in Northern Italy formed by numberless streamlets from the Helvetian Alps. In 568 the Romans defeated the Goths and Franks on its banks. Gen. Massena crossed it in 1806.

Adis. A city in Africa. Xantippe, chief of the Carthaginians, defeated under its walls the Romans commanded by Regulus.

Adit. A passage under ground by which miners approach the part they intend to sap.

Adleighur. A fortress in Bundelcund, which was captured in 1809 by a force under the command of Col. Gabriel Martindell.

Adjourn. To suspend business for a time, as from one day to another; said of military courts. *Adjournment without day (sine die)*, indefinite postponement.

Adjutant (from *adjuvo*, "to help"). A regimental staff-officer with the rank of lieutenant, appointed by the regimental commander to assist him in the execution of all the details of the regiment or post. He is the channel of official communication. It is his duty to attend daily on the commanding officer for orders or instructions of any kind that are to be issued to the command, and promulgate the same in writing after making a complete record thereof. He has charge of the books, files, and men of the headquarters; keeps the rosters; parades and inspects all escorts, guards, and other armed parties previous to their proceeding on duty. He should be competent to instruct a regiment in every part of the field exercise, should understand the internal economy of his corps, and should notice every irregularity or deviation from the established rules or regulations. He should, of course, be an officer of experience, and should be selected with reference to special fitness, as so much depends upon his manner and thoughtfulness in the exercise of the various and important duties imposed upon him. Unexceptionable deportment is especially becoming to the adjutant.

Adjutant-General. An officer of distinction selected to assist the general of an army

in all his operations. The principal staff-officer of the U. S. army. The principal staff-officers of generals of lower rank are called assistant adjutant-generals.

Adjutant-General's Department. In the United States, consists of 1 adjutant-general with the rank of brigadier-general; 2 assistant adjutant-generals, colonels; 4 lieutenant-colonels, and 10 majors; also about 400 enlisted clerks and messengers. The officers are generally on duty with general officers who command corps, divisions, departments, etc. "They shall also perform the duties of inspectors when circumstances require it." The lowest grades must be selected from the captains of the army.

Administration. Conduct, management; in military affairs, the execution of the duties of an office.

Administration, Council of. A board of officers periodically assembled at a post for the administration of certain business.

Admissions. In a military sense, the judge-advocate is authorized when he sees proper to admit what a prisoner expects to prove by absent witnesses.

Adobe (Sp.). An unburnt brick, dried in the sun, made from earth of a loamy character, containing about two-thirds fine sand mixed intimately with one-third or less of clayey dust or fine sand.

Adour. A river in the southwest of France, which Lord Wellington, after driving the armies of Napoleon Bonaparte across the Pyrenees, passed in the face of all opposition, on the 26th of February, 1814.

Adrana. A river in Germany, at present called Eder. Germanicus defeated the Germans on its bank in 15.

Adrianople. A Turkish city named after the Emperor Adrian; unsuccessfully besieged by the Goths in the 4th century; the army of Murad I. took the city in 1361; unconditionally surrendered to the Russians in August, 1829; peace was declared in this city between Russia and Turkey, September 14, 1829, and the city relinquished to the Turks.

Adrumetum, or Hadrumetum. An ancient African city, now in ruins, situated on the Mediterranean, southeast from Carthage. The Moors took this city from the Romans in 549, but it was retaken soon after by a priest named Paul.

Advance. Before in place, or beforehand in time; used for advanced; as, advance-guard, or that before the main guard or body of an army; to move forward.

Advanced Covered Way. Is a *terre plein* on the exterior of the advanced ditch, similar to the first covered way.

Advanced Ditch. Is an excavation beyond the glacis of the *enciente*, having its surface on the prolongation of that slope, that an enemy may find no shelter when in the ditch.

Advanced Guard. A detachment of troops which precedes the march of the main body.

Advanced Guard Equipage. See **PON-TONS.**

Advanced Lunettes. Works resembling bastions or ravelins, having faces or flanks. They are formed upon or beyond the glacis.

Advanced Works. Are such as are constructed beyond the covered way and glacis, but within range of the musketry of the main works.

Advancement. In a military sense, signifies honor, promotion, or preferment in the army, regiment, or company.

Advantage Ground. That ground which affords the greatest facility for annoyance or resistance.

Adversary. Generally applied to an enemy, but strictly an opponent in single combat.

Advising to Desert. Punishable with death or otherwise, as a court-martial may direct. See **APPENDIX, ARTICLES OF WAR, 61.**

Advocate, Judge-See **JUDGE-ADVOCATE.**

Adynati. Ancient name for invalid soldiers receiving pension from the public treasury.

Ægide (Æges). A name, according to Homer, for a protecting covering wound around the left arm in the absence of a shield; used by Jupiter, Minerva, and Apollo.

Ægolethron (Gr.). A plant. This word means goat and death. It was believed by the ancients that this plant would kill goats only, if eaten by them. Xenophon reports that the soldiers of the army of the "Ten Thousand" tasted of some honey prepared from this plant which caused them to be affected with hallucinations.

Ægospotamos ("Stream of the Goat"). A small river flowing into the Hellespont, in the Thracian Chersonese; is famous for the defeat of the Athenian fleet by the Lacedæmonians under Lysander, which put an end to the Peloponnesian war, and to the predominance of Athens in Greece, 405 B.C.

Æneatores. In military antiquity, the musicians in an army, including those who sounded the trumpets, horns, etc.

Ærarium Militare. In Roman antiquity, the war treasury of Rome, founded by Augustus; in addition to other revenues, the one-hundredth part of all merchandise sold in Rome was paid into it.

Æro. A basket used by the Roman soldiers to carry earth in to construct fortifications.

Ærumnula. A wooden pole or fork, introduced among the Romans by Consul Marius. Each soldier was provided with one of these poles, which had attached thereto a saw, hatchet, a sack of wheat, and baggage; and he was compelled to carry it on a march.

Affair. An action or engagement, not of sufficient magnitude to be termed a battle.

Affamer (Fr.). To besiege a place so closely as to starve the garrison and inhabitants.

Affidavit. In military law is an oath duly subscribed before any person authorized to administer it. In the U. S. service, in the absence of a civil officer any commissioned officer is empowered to administer an oath.

Afforciament. An old term for a fortress or stronghold.

Afghanistan. A large country in Central Asia, at war with England 1888, and 1878-79.

Afrancesados (Sp.). Name given to the Spaniards who upheld the oath of allegiance to king Joseph Bonaparte; also called Josephins (in the Peninsular war).

Aga. Rank of an officer in the Turkish army; the same as a general with us.

Age. In a military sense, a young man must be 14 years old before he can become an officer in the English army, or be entered as a cadet at Woolwich, in the English military academy. For admission to the military academy at West Point, U. S., the age is from 17 to 22 years. Men are enlisted for soldiers at from 17 to 45 in the English army, and in the U. S. army at from 18 to 35. Officers in the U. S. army may be retired, at the discretion of the President, at 62 years of age.

Agema (Gr.). In the ancient military art, a kind of soldiery, chiefly in the Macedonian army. The word is Greek, and denotes vehemence, to express the strength and eagerness of this corps.

Agen. Principal place of the department Lot-et-Garonne, France, on the right bank of the river Garonne, which has a city of the same name, and was the scene of many battles.

Agency. A certain proportion of money which is ordered to be subtracted from the pay and allowances of the British army, for transacting the business of the several regiments comprising it.

Agent, Army. A person in the civil department of the British army, between the paymaster-general and the paymaster of the regiment, through whom every regimental concern of a pecuniary nature is transacted.

Agger. In ancient military writings, denotes the middle part of a military road raised into a ridge, with a gentle slope on each side to make a drain for the water, and keep the way dry; it is also used for a military road. Agger also denotes a work or fortification, used both for the defense and attack of towns, camps, etc., termed among the moderns, lines. Agger is also used for a bank or wall erected against the sea or some great river to confine or keep it within bounds, and called by modern writers, dam, sea-wall.

Agiades. In the Turkish armies are a kind of pioneers, or rather field engineers, employed in fortifying the camp, etc.

Agiem-clich. A very crooked sabre, rounded near the point; an arm much in use in Persia and Turkey.

Agincourt, or Azincourt. A village of France, celebrated for a great battle fought

near it in 1415, wherein Henry V. of England defeated the French.

Agmen. Roman name for an army on the march.

Agminalis. Name given by the ancients to a horse which carried baggage, equipments, etc., on its back; now termed pack-horse.

Agnadello. Village in the duchy of Milan, on a canal between the rivers Adda and Serio, celebrated by the victory of Louis XII., king of France, over the Venetian and Papal troops in 1509, and by a battle between Prince Eugene and the Duke of Vendôme in 1705.

Agriente (now *Girgenti*). City in Sicily, situated on the Mediterranean; sacked by the Carthaginians under Amilcar in 400 B.C., and taken twice by the Romans in 262 and 210 B.C.

Aguebelle. City in the province of Maurienne, in Savoy. The French and Spaniards defeated the troops of the Duke of Savoy in 1742.

Aguerri (*Fr.*). A term applied to an officer or soldier experienced in war.

Agustina. See SARAGOSSA, MAID OF.

Ahmednuggur. A strong fortress in the Deccan, 80 miles from Poonah, which was formerly in the possession of Scindia, but fell to the British arms during the campaign conducted by Gen. Wellesley.

Aidan (*Prince*). See SCOTLAND.

Aid-de-camp. An officer selected by a general to carry orders; also to represent him in correspondence and in directing movements.

Aid-major (*Fr.*). The adjutant of a regiment.

Aigremore. A term used by the artificer in the laboratory, to express the charcoal in a state fitted for the making of powder.

Aiguille (*Fr.*). An instrument used by engineers to pierce a rock for the lodgment of powder, as in a mine, or to mine a rock, so as to excavate and make roads.

Aiguillettes. A decoration, consisting of bullion cords and loops, which was formerly worn on the right shoulder of general officers, and is now confined to the officers of household cavalry; also worn in the U. S. army by officers of the adjutant-general's department, *aids-de-camp*, and adjutants of regiments.

Aiguillon. A city in France; while in the possession of the English in 1845, it was besieged by the Duke of Normandy, son of Philip de Valois. According to some authors, cannons were used on this occasion for the first time in France.

Aile (*Fr.*). A wing or flank of an army or fortification.

Ailettes (*Fr.*). Literally "little wings," were appendages to the armor worn behind or at the side of the shoulders by knights in the 18th century. They were made of leather covered with cloth, and fastened by silk laces. They are supposed to have been worn as a defense to the shoulders in war.

Aim. The act of bringing a musket, piece of ordnance, or any other missive weapon, to its proper line of direction with the object intended to be struck.

Aim-frontlet. A piece of wood hollowed out to fit the middle of a gun, to make it of an equal height with the breech; formerly made use of by the gunners, to level and direct their pieces.

Aiming Drill. A military exercise to teach men to aim fire-arms. Great importance is justly attached to this preliminary step in target practice.

Aiming-stand. An instrument used in teaching the theory of aiming with a musket. It usually consists of a tripod with a device mounted upon it, which holds the gun and allows it to be pointed in any direction.

Ainadin. Name of a field near Damas in Syria, celebrated by a battle on July 25, 688, in which Khaled, chief of the Saracens, defeated Verdan, a general of the Roman army. Verdan lost 50,000 men and was decapitated.

Ain-Beda (Africa). An engagement at this place between the French and Arabs in October, 1838.

Ain Taguin. "Spot of the little desert," in the province of Algiers; here the Duke d'Aumale surprised and dispersed the troops of Abd-el-Kader.

Air-cylinder. A pneumatic buffer used in America to absorb the recoil of large guns. For 10-inch guns, one cylinder is used; for the 15-inch, two. They are placed between the chassis rails, to which they are firmly secured by diagonal braces. A piston traversing the cylinder is attached to the rear transom of the top carriage. When the gun recoils the piston-head is drawn backwards in the cylinder, and the recoil is absorbed by the compression of the air behind it. Small holes in the piston-head allow the air to slowly escape while the gun is brought to rest. The *hydraulic buffer* largely used abroad operates in the same way, water being used in place of air.

Air, Resistance of. The resistance which the air offers to a projectile in motion. See PROJECTILES, THEORY OF.

Aire. A military position on the Adour, in the south of France, where the French were defeated by the English under Lord Hill, on March 2, 1814.

Air-gun. An instrument resembling a musket, used to discharge bullets by the elastic force of compressed air.

Aix. A small island on the coast of France between the Isle of Oleron and the continent. It is 12 miles northwest of Rochefort, and 11 miles from Rochelle. On it are workshops for military convicts.

Aix-la-Chapelle (Ger. *Aachen*). A district in the Prussian province of the Lower Rhine. Here Charlemagne was born in 742, and died in 814. The city was taken by the French in 1792; retaken by the Austrians in 1798; by the French 1794; reverted to

Prussia 1814. Congress held by the sovereigns of Austria, Russia, and Prussia, assisted by ministers from England and France, at Aix-la-Chapelle, and convention signed October 9, 1818.

Akerman (Bessarabia). After being several times taken it was ceded to Russia, 1812. Here the celebrated treaty between Russia and Turkey was concluded in 1826.

Aketon. Another name for a portion of armor, used in the feudal times, called the *gambeson* (which see).

Akhalzikh (Armenia). Near here Prince Paskiewitch defeated the Turks Aug. 24, and gained the city, Aug. 28, 1828.

Akindschi. A sort of Turkish cavalry, employed during the war between the Turks and the German emperors.

Aklat. A small town in Asiatic Turkey, taken by Eddin in 1228, and by the Turks in the 14th century.

Akmerjid. A city in the Crimea; an ancient residence of the khan of Tartary; taken by the Russians in 1771.

Akoulis. A city in Armenia, often pillaged by the Persians and Turks; taken in 1752 by the Persian general Azad-Khan, by whom the majority of the inhabitants were put to the sword.

Akrebah. At this place, about the year 630, Khaled, general of the Mussulman troops, fought the army of a new prophet named Mosseilamah, who perished in the combat.

Ala. According to Latin authors, this word signifies the wing of an army, i.e., the flanks, on which were placed troops furnished by the allied nations; also sometimes used to designate a brigade of cavalry occupying the same position in battle.

Alabama. One of the Southern States of the American confederacy, is bounded on the north by Tennessee, east by Georgia, south by Florida and the Gulf of Mexico, and west by Mississippi. The celebrated exploring expedition of De Soto in 1541 is believed to have been the first visit of the white man to the wilds of Alabama. In the beginning of the 18th century the French built a fort on Mobile Bay, but the city of that name was not commenced till nine years later (1711). In 1763, the entire French possessions east of the Mississippi (except New Orleans) fell into the hands of the English. Alabama was incorporated first with Georgia, afterwards, in 1802, with the Mississippi Territory; but finally, in 1819, it became an independent member of the great American confederacy. In 1813 and 1814 the Creek Indians waged war on the settlers and massacred nearly 400 whites who had taken refuge at Fort Mimms, on the Alabama River. They were, however, soon reduced to subjection by Gen. Jackson, and after their defeat at Horseshoe Bend, March, 1814, the greater portion of their territory was taken from them, and they were subsequently removed to the Indian Territory. On the outbreak of the civil war

in 1861, the temporary capital of the Confederate States was established at Montgomery, Ala., but it was soon afterwards removed to Richmond, Va.

Alabanda (*Bour Dogan*, or *Arab Hissar*). A city in Asia Minor; destroyed by Labienus, a Roman general, in 38 B.C.

Alacays. Name given by the ancients to a kind of soldiery, and afterwards to servants following an army.

Alage. A mounted guard of the Byzantine emperors, doing duty in the palace of Constantinople, and defending, in case of danger, the person of the emperor.

Alaibeg. A Turkish commander of regiments of levied troops.

Alamo, Fort, or The Alamo. A celebrated fort in Bexar County, near San Antonio, Texas, where a small garrison of Texans bravely resisted a body of Mexicans ten times their number, and perished to a man, March 6, 1836. This spot has hence been called the Thermopylæ of Texas, and "Remember the Alamo!" was used as the battle-cry of the Texans in their war of independence.

Alanda. Name of a legion formed by Julius Cæsar from the best warriors of the Gauls.

Aland Isles (Gulf of Bothnia). Taken from Sweden by Russia, 1809. See **BOMAR-SUND**.

Alani. A Tartar race; invaded Parthia, 75; were subdued by the Visigoths, 452, and eventually incorporated with them.

Alarcos (Central Spain). Here the Spaniards under Alfonso IX., king of Castile, were totally defeated by the Moors, July 19, 1195.

Alares. Name given by the Romans to troops which were placed on the wings of an army; these troops were generally furnished by allies.

Alarm. A sudden apprehension of being attacked by surprise, or the notice of such attack being actually made. It is generally signified by the discharge of fire-arms, the beat of a drum, etc.

Alarm Gun. A gun fired to give an alarm.

Alarm Post. In the field, is the ground appointed by the quartermaster-general for each regiment to march to, in case of an alarm. In a garrison, it is the place allotted by the governor for the troops to assemble on any sudden alarm.

Alaska. A large territory forming the northwest part of North America, which was purchased by the United States from Russia in 1867, and was annexed as a county to Washington Territory in 1872. The native inhabitants are Esquimaux, Indians, and Aleuts, with a few persons of Russian descent.

Alba de Tormes. A city in Spain, where the French defeated the Spaniards in 1809.

Albana. A city in ancient Albania, situated on the coast of the Caspian Sea; a wall was constructed to the west of the city for

the purpose of staying the progress of the Scythians, by Darius I., or by Chosrois.

Albania. A province in European Turkey, formerly part of the ancient Epirus, a scene of many battles; a revolt in Albania was suppressed in 1848.

Albanians, or Albanians. The inhabitants of the Turkish territory of Albania, are a very brave and active race, and furnish the best warriors for the Turkish army.

Albans, St. (Hertfordshire, Eng.). Near the Roman Verulam; first battle of St. Albans took place in May, 1455, between the Houses of Lancaster and York, wherein the former were defeated, and King Henry VI. taken prisoner; second battle took place in February, 1461, wherein Queen Margaret totally defeated the Yorkists and rescued the king.

Albe. A city in Naples, situated near the Lake Celano; in ancient times it was an important city in Samnium.

Albeck. A village in Würtemberg where 25,000 Austrians, under the command of Gen. Mack, were defeated by 6000 French in 1805.

Alberche. A river of Spain, which joins the Tagus near Talavera de la Reyna, where, in 1809, a severe battle was fought between the French army and the allied British and Spanish troops, in which the former were defeated.

Albe-Royale. A city in Lower Hungary, which sustained several sieges.

Albesia. In antiquity, a kind of shield, otherwise called *decumana*.

Albi. A city in the department of Tarn, France; pillaged by the Saracens in 780, and taken by Pepin in 765.

Albigenses. A sect of heretics, who were in existence during the 12th and 13th centuries, and inhabited Albi, France; fought many battles; went to Spain in 1238, where they were slowly exterminated.

Albuera. A small village near the river Guadiana, in Spain, where the French army under Marshal Soult was defeated by the British and Spanish forces under Marshal, afterwards Lord, Beresford, March 16, 1811.

Albufera (Spain, East Central). A lagoon, near which the French marshal Suchet (afterwards Duke of Albufera), defeated the Spaniards under Blake, January 4, 1812; this led to his capture of Valencia, January 9.

Alcacasbas (Portugal). A treaty was concluded here between Alfonso V. of Portugal and Ferdinand and Isabella of Castile.

Alcantara. A creek near Lisbon, on the banks of which a battle was fought between the Spaniards under Alva and the Portuguese under Antonio de Crato (prior of the Maltese order).

Alcantara, Order of. Knights of a Spanish military order, who gained a great name during the wars with the Moors.

Alcassar, or Alcacar. A fortified city in Morocco, situated between Ceuta and Tan-

gier; the narrowest point of the Strait of Gibraltar. The Portuguese seized this city in 1468.

Alcazar-Quiver. A city near Fez, Northwest Africa, where the Moors totally defeated the Portuguese, whose gallant king, Sebastian, was slain August 4, 1578.

Alcmaer. A city in Holland; besieged by the Spaniards in 1573 without success; here the British and Russians were defeated by the French in 1799.

Aldenhofen. A village of the Prussian Rhenish province, where the French, under Gen. Miranda, were defeated by Archduke Charles, March 1, 1793; the Austrians were defeated March 18, 1793.

Aldershot, Camp. A moor near Farnham, about 35 miles from London. In April, 1854, the War Office, having obtained a grant of £100,000, purchased 4000 acres of land for a permanent camp for 20,000 men; additional land was purchased in 1856. The camp is used as an army school of instructions.

Aldionaire (Aldionarius). A sort of equerry, who in the army was kept at the expense of his master. Under Charlemagne, the *aldionaires* were of an inferior rank.

Alem. Imperial standard of the Turkish empire.

Alemanni (or all men, i.e., men of all nations, hence *Allemanen*, German). A body of Suevi, who took this name; were defeated by Caracalla, 214. After several repulses they invaded the empire under Aurelian; they were subdued in three battles, 270. They were again vanquished by Julian, 356-57. They were defeated by Clovis at Tolbiac (or Zulpich), 496. The Suebians are their descendants.

Alemdar. An official who carries the green banner of Mahomet (Mohammed), when the sultan assists in ceremonies of solemnity.

Alençon (Northern France). Gave title to a count and duke. Martel, count of Anjou, seized this city, which was retaken by William the Conqueror in 1048. It was the scene of many battles.

Aleppo (Northern Syria). A large town named Beroea by Seleucus Nicator about 299 B.C. It was taken by the Turks in 638; by Saladin, 1198, and sacked by Timur, 1400. Its depopulation by the plague has been frequent; 60,000 persons were computed to have perished by it in 1797; and many in the year 1827. On October 16, 1850, the Mohammedans attacked the Christians, burning nearly everything. Three churches were destroyed; five others plundered, and thousands of persons slain. The total loss of property amounted to about a million pounds sterling; no interference was attempted by the pasha.

Aleria. An important city in Corsica, at the mouth of the river Tavignano; was taken in 259 B.C. by the Romans under Consul Cornelius.

Alert. Watchful; vigilant; active in vigi-

lance; upon the watch; guarding against surprise or danger.

Alesia, or Alisia. Now called Alise-Sainte-Reine, a city in the department of Cote-d'Or. This city was besieged and taken by the Romans in 52 B.C.; it was one of the greatest events of Cæsar's war in Gaul.

Alessandria. A city of Piedmont, built in 1168, under the name of Cæsarea by the Milanese and Cremonese, to defend the Tanaro against the emperor, and named after Pope Alexander III. It has been frequently besieged and taken. The French took it in 1796, but were driven out July 21, 1799. They recovered it after the battle of Marengo, in 1800, and held it until 1814, when the strong fortifications erected by Napoleon were destroyed. They have been restored since June, 1856.

Alet, or Aleth. A small city in the department of Ande, France; was taken by the Protestants in 1578.

Aleut. An inhabitant of the Aleutian Islands. These people differ both from the Indians of the neighboring continent and the Esquimaux farther north. They are expert hunters of the seal and other animals. They are industrious and peaceful, but addicted to drunkenness.

Aleutian Islands. A number of islands stretching from the peninsula of Alaska in North America to Kamtschatka in Asia. The greater number belong to the territory of Alaska.

Alfere, or Alferez. Standard-bearer; ensign; cornet. The old English term for ensign; it was in use in England till the civil wars of Charles I.

Alford (Northern Scotland), Battle of. Gen. Baillie, with a large body of Covenanters, was defeated by the Marquis of Montrose, July 2, 1645.

Alfuro. A city in Navarre, Spain. The British proceeded against the city in 1878, the garrison being absent; they found the women ranged on the ramparts disposed to defend the place. Capt. Tivet, commander of the English forces, would not attack the brave women, but retreated and did not molest the place.

Algebra. A peculiar kind of mathematical analysis allied to arithmetic and geometry.

Algidus. A mountain-range in Latium, Italy, where Cincinnatus defeated the Æqui in 458 B.C.

Algiers (now *Algeria*, Northwest Africa). Part of the ancient Mauritania, which was conquered by the Romans, 46 B.C.; by the Vandals, 489; recovered for the empire by Belisarius, 534, and subdued by the Arabs about 690. The city of Algiers was bombarded a number of times, and finally taken by the French in 1830. Algeria at present belongs to France.

Algonkins, or Alogonquins. One of the two great families of Indians who formerly peopled the country east of the Mississippi. The Chippewas are at present the most numerous race descended from this stock.

Alhama. A city in Spain, in the province of Granada. It was a most important fortress when the Moors ruled Granada, and its capture by the Christians in 1482 was the most decisive step in the reduction of their power.

Alhambra. The ancient fortress and residence of the Moorish monarchs of Granada; founded by Mohammed I. of Granada about 1253; surrendered to the Christians in November, 1491.

Ali Bey. Colonel of Turkish cavalry; also the rank of a district commander.

Alibi (*Lat.* "elsewhere"). An alibi is the best defense in law if a man is innocent; but if it turns out to be untrue, it is conclusive against those who resort to it.

Alicante. A fortified city and seaport in Spain, where the French defeated the Spaniards in a naval battle, April 1, 1688.

Alidade. The movable arm or rule carrying the sights of an angle-measuring instrument.

Alien. In law, implies a person born in a foreign country, in contradistinction to a natural born or naturalized person.

Alife (*Atifa*). A city in the kingdom of Naples, where Fabius defeated the Samnites in 307 B.C.

Alighur. See **ALLYGHUR**.

Align. To form in line as troops; to lay out the ground-plan, as of a road.

Alignment. A formation in straight lines, for instance, the alignment of a battalion means the situation of a body of men when drawn up in line. The alignment of a camp signifies the relative position of the tents, etc., so as to form a straight line from given points.

Aliwal. A village on the banks of the Sutlej, contiguous to the Punjab, where a British division, commanded by Maj.-Gen. Sir Henry Smith, on the 29th of January, 1846, encountered and defeated a superior body of Sikhs.

Aljubarrota (Portugal). Here John I. of Portugal defeated John I. of Castile, and secured his country's independence, August 14, 1385.

Alkmaer. See **BERGEN-OP-ZOOM**.

Allahabad (Northwest Hindostan). The holy city of the Indian Mohammedans, situated at the junction of the rivers Jumna and Ganges; founded by Akbar, in 1583; incorporated with the British possessions in 1803. During the Indian mutiny several Sepoy regiments rose and massacred their officers, June 4, 1857; Col. Neil marched promptly from Benares and suppressed the insurrection. In November, 1861, Lord Canning made this the capital of the northwest provinces.

Allecrete. Light armor used by both cavalry and infantry in the 16th century, especially by the Swiss. It consisted of a breastplate and gussets, often reaching to the middle of the thigh, and sometimes below the knees.

Allecti Milites. A name given by the

Romans to a body of men who were drafted for military service.

Allegiance. In law, implies the obedience which is due to the laws. *Oath of Allegiance* is that taken by an alien, by which he adopts America and renounces the authority of a foreign government. It is also applied to the oath taken by officers and soldiers in pledge of their fidelity to the state.

Allegiant. Loyal; faithful to the laws.

Allia (Italy). A small river flowing into the Tiber, where Brennus and the Gauls defeated the Romans, July 16, 890 B.C. The Gauls sacked Rome and committed so much injury that the day was thereafter held to be unlucky (*nefas*), and no public business was permitted to be done on its anniversary.

Alliage (Fr.). A term used by the French to denote the composition of metals used for the fabrication of cannon, mortars, etc.

Alliance. In a military sense, signifies a treaty entered into by sovereign states for their mutual safety and defense. In this sense alliances may be divided into such as are offensive, where the contracting parties oblige themselves jointly to attack some other power; and into such as are defensive, whereby the contracting powers bind themselves to stand by and defend one another, in case of being attacked by any other power. Alliances are variously distinguished according to their object, the parties in them, etc. Hence we read of equal, unequal, triple, quadruple, grand, offensive, defensive alliances, etc.

Alligati. A name given by the Romans to prisoners of war and their captors. A chain was attached to the right wrist of the prisoner and the left wrist of the warrior who captured him.

Allobroges. A powerful race in ancient Gaul; inhabited a part of Savoy; vanquished by Fabius Maximus, 126 B.C.

Allocutio. An oration addressed by a Roman general to his soldiers, to animate them to fight, to appease sedition, or to keep them to their duty.

Allodial. Independent; not feudal. The Allodii of the Romans were bodies of men embodied on any emergency, in a manner similar to our volunteer associations.

Allonge. A pass or thrust with a rapier or small sword, frequently contracted into *lunge*; also a long rein used in the exercising of horses.

Allowance. A sum paid periodically for services rendered. The French use the word *traitement* in this sense. The allowances of an officer are distinct from his pay proper, and are applicable to a variety of circumstances.

Alloy. Is a composition by fusion of two or more metals. The alloy most used for gun-making is bronze (which see).

Allumelle. A thin and slender sword which was used in the Middle Ages, to pierce the weak parts or joints of armor.

Ally. In a military sense, implies any

nation united to another,—under a treaty either offensive or defensive, or both.

Allyghur. A strong fortress on the north-west of India, which was captured, after a desperate conflict, by Lord Lake, in 1808. The French commander-in-chief, Gen. Peron, surrendered himself after the siege.

Alma. A river in the Crimea, near which was fought a great battle on September 20, 1854, between the Russian and Anglo-French armies; the Russians were defeated with great loss.

Almadie. A kind of military canoe or small vessel, about 24 feet long, made of the bark of a tree, and used by the negroes of Africa. Almadie is also the name of a long boat used at Calcutta, often from 80 to 100 feet long, and generally 6 or 7 broad; they are rowed with from 10 to 30 oars.

Alman-rivets, Almain-rivets, or Almayne-rivets. A sort of light armor derived from Germany, characterized by overlapping plates which were arranged to slide on rivets, by means of which flexibility and ease of movement were promoted.

Almaraz, Bridge of. In Spain, which on the 18th of May, 1812, was captured by Lord Hill, when he defeated a large French *corps d'armée*, which was one of the most brilliant actions of the Peninsular war.

Almeida. A strong fortress of Portugal, in the province of Beira. The capture of it by the Duke of Wellington, in 1811, after it had fallen into the hands of the French, was deemed a very brilliant exploit.

Almenara, or Almanara. City in Spain, in the province of Lerida, where, in 1710, Gen. Stanhope, with 4 regiments of dragoons and 20 companies of grenadiers, defeated a Spanish corps, composed of 4 battalions and 19 escadrons.

Almeria. City and seaport in Andalusia, Spain; captured from the Moors in 1147, by the united troops of Alfonso VII., king of Castile, Garcias, king of Navarre, and Raymond, count of Barcelona.

Almexial, Battle of. Between the Spaniards and Portuguese in 1668. The Portuguese were commanded by Sanctius Manuel, count of Vilaflor, and the celebrated Count Frederick von Schomberg, the latter being the veritable hero of the day. The Portuguese gained a great victory; the Spanish army was commanded by Don Juan of Austria, son of Philip IV.

Almissa (Dalminium). City in Dalmatia, Austria; it was the ancient capital of Dalmatia, but was ruined by Scipio Nasica in 156 B.C.

Almogavares. See CATALANS.

Almohades. Mohammedan partisans, followers of El-Mehedi in Africa, about 1120. They subdued Morocco, 1145; entered Spain and took Seville, Cordova, and Granada, 1146-56; ruled Spain until 1232, and Africa until 1278.

Almonacid-de-Zorita. A town in the province of Guadalaxara, Spain, where the French defeated the Spaniards in 1809.

Almora. City in Bengal, which the English captured in 1815, and still hold.

Almoravides. Mohammedan partisans in Africa, rose about 1050; entered Spain by invitation, 1086; were overcome by the Almohades in 1147.

Alney. An island in the Severn, Gloucestershire, England. Here a combat is asserted to have taken place between Edmund Ironside and Canute the Great, in the sight of their armies. The latter was wounded, and proposed a division of the kingdom, the south part falling to Edmund. Edmund was murdered at Oxford shortly after, it is said, by Aedric Streon, and Canute obtained possession of the whole kingdom, 1016.

Alnwick (Sax. *Elnwix*). On the river Alne in Northumberland, England, was given at the Conquest to Ivode Vesco. It has belonged to the Percies since 1810. Malcolm, king of Scotland, besieged Alnwick in 1098, where he and his sons were killed. It was taken by David I. in 1186, and attacked in 1174, by William the Lion, who was defeated and taken prisoner. It was owned by King John in 1215, and by the Scots in 1448. Since 1864 the castle has been repaired and enlarged with great taste and at unsparing expense.

Alost. A city in Belgium, captured and dismantled by Turenne in 1687, then abandoned to the allies after the battle of Ramillies, in 1706.

Alps. European mountains. Those between France and Italy were passed by Hannibal, 218 B.C.; by the Romans, 164 B.C., and by Napoleon I., May, 1800.

Alsace. See **ELSASS**.

Altenheim. A village on the banks of the Rhine, grand duchy of Baden, where the French under Count de Lorges fought the Imperials, July 30, 1675, neither side being victorious; the French army retreated after the death of Turenne.

Altenkirchen. A town in the Prussian Rhine province, where several battles were fought during the war of the Republic, in one of which Gen. Marceau was killed, while protecting the retreat of Gen. Jourdan, September 20, 1796.

Altiscope. A device which enables a person to see an object in spite of intervening obstacles. In gunnery it is used to point a piece without exposing the person of the gunner. The simplest form consists of a small mirror set in the line of the sights, which reflects the sights and the object aimed at to the eye of the gunner. This form of reflecting sight is used with the Moncrieff counterpoise carriage, and has been recently proposed by Col. Laidley (U. S. Ordnance Corps) for small-arms.

Altitude. Height, or distance from the ground, measured upwards, and may be both accessible and inaccessible. Altitude of a shot or shell, is the perpendicular height of the vortex of the curve in which it moves above the horizon. Altitude of the eye, in perspective is a right line let fall from the eye, perpendicular to the geometrical plane.

Alumbagh. A palace with other buildings near Lucknow, Oude, India, taken from the rebels and heroically defended by the British under Sir James Outram, during the mutiny, September, 1857. He defeated an attack of 80,000 Sepoys on January 12, 1858, and of 20,000 on February 21.

Aluminium Bronze. An alloy of copper and aluminium, having great strength and hardness. See **ORDNANCE, METALS FOR**.

Alure. An old term for the gutter or drain along a battlement or parapet wall.

Alveda. An ancient city in Spain, where a battle was fought between Ramire I., king of the Asturias, and the Moors under the famous Abdolrahman, or Abd-el-Rahm; according to Spanish history, the Moors lost 60,000 men.

Amantea, or Amantia. City and seaport in Naples; sustained a siege against the French in 1806. It is believed that this city is the ancient *Nepetum*.

Amazons. Female warriors. Tribes, either real or imaginary, belonging to Africa and Asia, among which the custom prevailed for the females to go to war; preparing themselves for that purpose by destroying the right breast, in order to use the bow with greater ease. According to Greek tradition, an Amazon tribe invaded Africa, and was repulsed by Theseus, who afterwards married their queen. Hence all female warriors have been called Amazons.

Amberg. A town in Bavaria, where the French were defeated by the Austrians in 1796.

Ambit. The compass or circuit of any work or place, as of a fortification or encampment, etc.

Ambition. In a military sense, signifies a desire of greater posts or honors. Every person in the army or navy ought to have a spirit of emulation to arrive at the very summit of the profession by his personal merit.

Amblef. Ancient residence of the kings of France on the river of the same name, in Germany. Here Charles Martel defeated Chilperic II. and Rangenfrois, mayor of the Neustrians, 716.

Ambulances. Are flying hospitals, so organized that they can follow an army in all its movements, and are intended to succor the wounded as soon as possible; a two- or four-wheeled vehicle for conveying the wounded from the field; called also an ambulance-cart.

Ambuscade. A snare set for an enemy either to surprise him when marching without precaution, or to draw him on by different stratagems to attack him with a superior force.

Ambush. A place of concealment where an enemy may be surprised by a sudden attack.

Ame. A French term, similar in its import to the word *chamber*, as applied to cannon, etc.

Amende Honorable (Fr.). In the old

armies of France, signified an apology for some injury done to another, or satisfaction given for an offense committed against the rules of honor or military etiquette, and was also applied to an infamous kind of punishment inflicted upon traitors, parricides, or sacrilegious persons, in the following manner: The offender being delivered into the hands of the hangman, his shirt stripped off, a rope put about his neck, and a taper in his hand; then he was led into the court, where he begged pardon of God, the court, and his country. Sometimes the punishment ended there; but sometimes it was only a prelude to death, or banishment to the galleys. It prevails yet in some parts of Europe.

Amenebourg. A place in Hanover which was captured from the English by the French in 1762.

Amentatæ. A sort of lance used by the Romans, which had a leathern strap attached to the centre of it.

Amentum. A leathern strap used by the Romans, Greeks, and Galicians, to throw lances. It was fastened around the second and third fingers, a knot was tied on it, which at the throwing of the lance loosened itself.

America. One of the great divisions of the earth's surface, so called from Amerigo Vespucci, a Florentine navigator, who visited South America in 1499. It is composed of two vast peninsulas called North and South America, extending in a continuous line 9000 miles, connected by the Isthmus of Panama or Darien, which is only 28 miles wide at its narrowest part. The physical features of this large continent are on a most gigantic scale, comprising the greatest lakes, rivers, valleys, etc., in the world; and its discovery, which may be said to have doubled the habitable globe, is an event so grand and interesting that nothing parallel to it can be expected to occur again in the history of mankind. Upon its discovery, in the latter half of the 16th century, colonists, settlers, warriors, statesmen, and adventurers of all nations began to flock to its shores, until after a lapse of nearly four centuries of wars, struggles, civilization, progress, and amalgamation of the more powerful races, and weakness and decay of the effete, it ranks in wealth and enlightenment as the first of the great divisions of the earth. Of the different races, governments, etc., occupying its area, it is not necessary here to speak; events of importance in their histories will be found under appropriate headings in this work.

Ames Gun. The rifled guns made by Mr. Horatio Ames, of Falls Village, Conn., are made of wrought iron on the built-up principle. See **ORDNANCE, CONSTRUCTION OF.**

Amiens. A city in Picardy (Northern France). It was taken by the Spaniards March 11, and retaken by the French September 25, 1587. The preliminary articles of the peace between Great Britain, Holland, France, and Spain were signed in London by Lord Hawkesbury and M. Otto, on the part of

England and France, October 1, 1801, and the definitive treaty was subscribed at Amiens, March 27, 1802, by the Marquis of Cornwallis for England, Joseph Bonaparte for France, Azara for Spain, and Schimmelpennick for Holland. War was declared in 1803.

Amisus. A city in the ancient kingdom of Pontus, fortified by Mithridates, and captured by Lucullus in 71 B.C.

Ammedera. An ancient city in Africa, where the rebel Gildon was defeated by Stilicho in 398.

Ammunition. Is a term which comprehends gunpowder, and all the various projectiles and pyrotechnical composition and stores used in the service. See **ORDNANCE, AMMUNITION FOR.**

Ammunition Bread. That which is for the supply of armies and garrisons.

Ammunition-chest. See **ORDNANCE FOR CAISSON.**

Ammunition Shoes. Those made for soldiers and sailors in the British service are so called, and particularly for use by those frequenting the magazine, being soft and free from metal.

Ammunition, Stand of. The projectile, cartridge, and sabot connected together.

Amnesty. An act by which two belligerent powers at variance agree to bury past differences in oblivion; forgiveness of past offenses.

Amnias. A stream in Asia near which the army of Nicomedes, king of Bithynia, was defeated by the troops of Mithridates in 92 B.C.

Amorce (Fr.). An old military word for fine-grained powder, such as was sometimes used for the priming of great guns, mortars, or howitzers; as also for small-arms, on account of its rapid inflammation. A port-fire or quick-match.

Amorcer (Fr.). To prime; to decoy, to make a feint in order to deceive the enemy and draw him into a snare; to bait, lure, allure.

Amorcoir (Fr.). An instrument used to prime a musket; also for a small copper box in which were placed the percussion-caps.

Amoy. A town and port in China, which was taken by the troops under Sir Hugh Gough, assisted by a naval force, in August, 1841.

Ampfing. A village in Bavaria, where Louis, king of Bavaria, defeated Frederick of Austria in 1822; here Gen. Moreau was attacked by a superior force of Austrians in 1800, and accomplished his celebrated retreat.

Amphæa. A city of Messenia, captured by the Lacedæmonians in 748 B.C.

Amphéc. A city in Palestine where the Philistines defeated the Israelites in the year 1100 B.C.

Amphictyonic Council. A celebrated congress of deputies of twelve confederated tribes of ancient Greece, which met twice every year. The objects of this council were to insure mutual protection and for-

bearance among the tribes, and for the protection of the temple of Delphi.

Amphipolis (now *Emboli*). A city situated on the Strymon in Macedonia; was besieged in 422 B.C., by the Athenians, where Cleon their chief was killed. Philip of Macedon captured the city in 368.

Amplitude. In gunnery, is the range of shot, or the horizontal right line, which measures the distance which it has run.

Ampoulette (*Fr.*). A wooden cylinder which contains the fuze of hollow projectiles.

Amsterdam. The capital of Holland. It was occupied by the French general Pichegru on January 19, 1795, and by the Prussians in 1818.

Amstetten. A village on the highway between Ems and Vienna, where the Russians were defeated by the French under Murat, November 5, 1805.

Amusette (*Fr.*). A brass gun, of 5 feet, carrying a half-pound leaden ball, loaded at the breech; invented by the celebrated Marshal Saxe. It is no longer used.

Amyclæ. An ancient town of Laconia, on the right bank of the Eurotas, famous as one of the most celebrated cities of the Peloponnesus in the heroic age. It is said to have been the abode of Castor and Pollux. This town was conquered by the Spartans about 775 B.C.

Anabash. In antiquity, were expeditious couriers, who carried dispatches of great importance in the Roman wars.

Anacara. A sort of drum used by the Oriental cavalry.

Anacleticum. In the ancient art of war, a particular blast of the trumpet, whereby the fearful and flying soldiers were rallied to the combat.

Anah. A city in Asiatic Turkey, which was captured and devastated in 1807 by the Wahabites, who were a warlike Mohammedan reforming sect.

Anam, or **Annam**, Empire of. Also called Cochin China, an empire in South-eastern Asia, which became involved in a war with France (1858-62), concluded by a treaty by which the emperor of Anam ceded the provinces of Cochin China, Saigon, Bienhoa, and Mytho to France. Subsequently three other provinces were annexed to France in 1867.

Anapa. A city in Circassia which was fortified by the Turks in 1784; stormed and taken by the Russians in 1791.

Anarchy. Want of government; the state of society where there is no law or supreme power, or where the laws are not efficient, and individuals do what they please with impunity; political confusion; hence, confusion in general.

Anatha. A fort on an island of the Euphrates; taken by Julian the Apostate in 368.

Anatolia, **Nadoli**, or **Natolia**. The modern name of Asia Minor, a peninsula in the most western territory of Asia, extending northward from the Mediterranean to the

Euxine, or Black Sea, and eastward from the Grecian Archipelago to the banks of the Euphrates. It is a part of the Turkish dominions, and was in ancient times the seat of powerful kingdoms and famous cities.

Anazarba, or **Anazarbus**. A city in Asia Minor, where the Christians were defeated by the Saracens in 1180.

Anazehs. Nomadic Arabs, who infested the desert extending from Damas to Bagdad; they often laid under contribution the caravans on the way to Mecca.

Ancile. In antiquity, a kind of shield, which fell, as was pretended, from heaven, in the reign of Numa Pompilius; at which time, likewise, a voice was heard declaring that Rome would be mistress of the world as long as she should preserve this holy buckler.

Ancona. An ancient Roman port on the Adriatic. In 1790 it was taken by the French; but was retaken by the Austrians in 1799. It was occupied by the French in 1832; evacuated in 1838; after an insurrection it was bombarded and captured by the Austrians, June 18, 1849. The Marches (comprising this city) rebelled against the papal government in September, 1860. Lamoriciere, the papal general, fled to Ancona after his defeat at Castelfidardo, but was compelled to surrender himself, the city and the garrison, on September 28. The king of Sardinia entered soon after.

Ancyra. A town in ancient Galatia, now *Angora*, or *Engour*, Asia Minor. Near this city, on July 28, 1402, Timur, or Tamerlane, defeated after a three days' battle and took prisoner the sultan Bajazet, and is said to have conveyed him to Samarcand in a cage.

Andabates. In military antiquity, a kind of gladiators who fought hoodwinked, having a kind of helmet that covered the eyes and face. They fought mounted on horseback, or on chariots.

Andaman Islands. A group of small islands in the Bay of Bengal, which has been used by Great Britain as a penal colony for Hindoos. The Earl of Mayo, governor-general of India, was assassinated here by a convict, February 8, 1872.

Anderlecht. A town near Brussels, in Belgium, where the French under Gen. Dumouriez defeated the Austrians, November 18, 1792.

Andernach. A city in Rhenish Prussia; near here the emperor Charles I. was totally defeated by Louis of Saxony, on October 8, 876.

Andersonville. A post-village of Sumter Co., Ga., about 65 miles south-southwest of Macon. Here was located a Confederate military prison in which Union soldiers were confined during the civil war. So severe was the treatment which they received here (nearly 13,000 having died), that a general feeling of horror was excited against the superintendent, Capt. Henry Wirz; and after the close of the war he was tried for inhuman treatment of the prisoners, found

guilty, and executed November, 1865. The place is now the site of a national cemetery.

Andrew, St., or The Thistle, Order of. A nominally military order of knighthood in Scotland. The principal ensign of this order is a gold collar, composed of thistles interlinked with amulets of gold, having pendent thereto the image of St. Andrew with his cross and the motto, *Nemo me impune lacessit*.

Andrew, St., Knights of. Is also a nominal military order instituted by Peter III. of Muscovy in 1698.

Andrussov, Peace of. This peace was ratified (January 30, 1867) between Russia and Poland for 13 years, with mutual concessions, although the latter power had been generally victorious.

Anelace, or Anlace. A kind of knife or dagger worn at the girdle by civilians till about the end of the 15th century.

Anemometer, or Wind-gauge. An instrument wherewith to measure the direction and velocity of wind under its varying forces,—used in the Signal service.

Aneroid Barometer. A pocket instrument indicating variations in atmospheric pressure. Used in military surveys to obtain the height of mountains. It consists of a circular metallic box, hermetically sealed, from which the air has been extracted. The play of the thin, metallic cover under atmospheric pressure, is made to operate a hand pointing to a scale on the dial-face.

Angaria. According to ancient military writers, means a guard of soldiers posted in any place for the security of it. Angaria, in civil law, implies a service by compulsion; as, furnishing horses and carriages for conveying corn and other stores for the army.

Angeliaphori. Reconnoitring parties of the Grecian army.

Angel-shot. A kind of chain-shot. See CHAIN-SHOT.

Angers. Principal city of the department of Maine-et-Loire, France. It was sacked by the Normans during the 9th century; taken and retaken several times by the Bretons, English, and French.

Anghiari. A city of Tuscany, where the Florentines under Bernardino Ubaldini were defeated by the Milanese general Torello, in 1425, and in 1440 the Florentine general Orsini defeated the Milanese general Piccinino.

Angle. In geometry, is the inclination of two lines meeting one another in a point, or the portion of space lying between two lines, or between two or more surfaces meeting in a common point called the *vertex*. Angles are of various kinds according to the lines or sides which form them. Those most frequently referred to in fortification and gunnery are:

ANGLE, DIMINISHED, is that formed by the exterior side and the line of defense.

ANGLE, FLANKED, or SALIENT, is the projecting angle formed by the two faces of a bastion.

ANGLE, INTERIOR FLANKING, is that which is formed by the meeting of the line of defense and the curtain.

ANGLE OF ARRIVAL. The angle of arrival is the angle which the tangent to the trajectory at the crest of the parapet makes with the horizon.

ANGLE OF DEPARTURE, or ANGLE OF PROJECTION, is the angle which the tangent makes with the horizontal at the muzzle.

ANGLE OF ELEVATION, or ANGLE OF FIRE, in gunnery, is that which the axis of the barrel makes with the horizontal line.

ANGLE OF FALL, in gunnery, is the angle made at the point of fall by the tangent to the trajectory with a horizontal line in the plane of fire.

ANGLE OF FIRE, in gunnery, is the angle included between the line of fire and horizon; on account of the balloting of the projectile, the angle of fire is not always equal to the angle of departure, or projection.

ANGLE OF INCIDENCE is that which the line of direction of a ray of light, ball from a gun, etc., makes at the point where it first touches the body it strikes against, with a line drawn perpendicularly to the surface of that body.

ANGLE OF REFLECTION is the angle intercepted between the line of direction of a body rebounding after it has struck against another body, and a perpendicular erected at the point of contact.

ANGLE OF SIGHT, in gunnery, is the angle included between the line of sight and line of fire. Angles of sight are divided into natural and artificial angles of sight, corresponding to the natural and artificial lines of sight, which inclose them. See POINTING.

ANGLE OF THE CENTRE is the angle formed at the centre of the polygon by lines drawn thence to the points of two adjacent bastions.

ANGLE OF THE EPAULE, or SHOULDER, is formed by one face and one flank of the bastion.

ANGLE OF THE FACE is formed by the angle of the face and the line of defense produced till they intersect each other.

ANGLE OF THE FLANK is that formed by the flank and curtain.

ANGLE OF THE LINE OF DEFENSE is that angle made by the flank and the line of defense.

ANGLE OF THE POLYGON is that formed by the meeting of two of the sides of the polygon; it is likewise called the *polygon angle*.

ANGLE OF THE TENAILLE, or FLANKING ANGLE, is made by two lines fchant,—that is, the faces of the two bastions extended until they meet in an angle towards the curtain, and is that which always carries its point towards the outworks.

ANGLE, RE-ENTERING. An angle whose vertex points inward, or towards the place. A re-entering angle which is not defended by a flanking fire is said to be *dead*.

Angles. An ancient German tribe from

which England derives its name. They occupied a narrow district in the south of Sleswick, whence some of them passed over in the 5th century, in conjunction with other Saxon tribes, into Britain, where they conquered the native Britons, and established the Anglo-Saxon Heptarchy. See **HEPTARCHY**.

Anglou. A place in Armenia where a Persian army 4000 strong defeated and cut to pieces a Roman army of 80,000, in 543.

Angon. In ancient military history, was a kind of a dart of modern length, having an iron beaded head and cheeks; in use about the 5th century. This sort of javelin was much used by the French. The iron head of it resembled a *fleur-de-lis*.

Angora. See **ANCYRA**.

Angouleme. A city in the department of Charente, France. It was ruined by the Normans during the 9th century, and devastated several times during the 16th century.

Anguis. A flag adopted by the Romans, which was carried at the head of a cohort (the tenth part of a Roman legion, consisting of 600 men); this flag resembled a serpent in shape, and was more commonly called *draco*.

Angusticlave. A robe or tunic embroidered with purple studs or knobs, and with narrow purple stripes, worn by Roman knights, to distinguish them from members of the senatorian order, who wore a garment with broad stripes, called *latus clavus*.

Anholt, Island of (Denmark). Was taken possession of by England, May 18, 1809, in the French war, on account of Danish cruisers injuring British commerce. The Danes made an attempt to regain it with a force which exceeded 1000 men, but were gallantly repulsed by the British force, not amounting to more than 150, March 27, 1811.

Animate, To. In a military sense, is to encourage, to incite, to add fresh impulse to any body of men who are advancing against an enemy, or to prevent them from shamefully abandoning their colors in critical situations.

Anime (Fr.). A sort of ancient cuirass, also called *brigandine*; was used in Italy until the 17th century, under the name of *anima*, or *animetta*.

Anio (now Teverone). A river of ancient Italy, an affluent of the Tiber. On its banks the Romans gained two great battles over the Gauls, one by Camillus about 367 B.C., and the other about sixty years afterwards.

Aniocrater. The highest military rank of the Lacedæmonians; one who commanded the whole army during the absence of the king.

Anippus. Name of the light cavalry of the Grecians.

Anisocycle. An ancient machine of a spiral form, like the spring of a watch, used for throwing arrows to a great distance.

Anitorgis. A city in Spain, near which Asdrubal, general of the Carthaginians,

gained a memorable battle over the Romans under Scipio and his brother Publius, in 212 B.C.

Anjou, or Beauge, Battle of. Between the English and French; the latter commanded by the Dauphin of France, March 22, 1421. The English were defeated; the Duke of Clarence was slain by Sir Allan Swinton, a Scotch knight, and 1500 men perished on the field; the Earls of Somerset, Dorset, and Huntingdon were taken prisoners. Beauge was the first battle that turned the tide of success against the English.

Annals. A species of military history, wherein events are related in the chronological order they happened. They differ from a perfect history, in being only a mere relation of what passes every year, as a journal is of what passes every day.

Annatinæ. Were transport-ships (so called by Julius Cæsar) in which were transported provisions, etc., to armies and fleets. Also called *Corbitæ*.

Anneau d'Or (Fr.). A gold ring. In accordance with the example of the ancients, Francis I. of France instituted a military recompense in the shape of an *anneau*, for all who distinguished themselves in any military enterprise.

Annee de Corbie (Fr.). Name given to the year 1636, when the capture of Corbie (by the Austrians), a small city of the department of the Somme, France (during the war which Richelieu had decided to undertake against the Austrian house), nearly caused the overthrow of France.

Anne, St., Order of. An order of knighthood, originally established in Holstein, and carried with the princes of that country into Russia. It was made a Russian order in 1796, and is now widely diffused.

Annihilate. To reduce to nothing; to destroy the existence of; to cause or cease to be; as, the army was annihilated.

Annoy. To injure or disturb by continued or repeated acts; to incommode or molest; as, to annoy an army by impeding their march, or by a continued cannonade.

Annuity. A sum of money payable yearly, to continue for a given number of years, for life or forever; an annual allowance. The U. S. government furnishes annuities and annuity goods to certain tribes of Indians.

Annul. To make void, or of no effect; to abrogate; to rescind;—used of laws, decisions of courts, or other established rules, permanent usages, and the like, which are made void by competent authority.

Annunciada. An order of military knighthood in Savoy, first instituted by Amadeus I. in the year 1409; their collar was of fifteen links, interwoven one with another, and the motto "F. E. R. T.," signifying *fortitudo ejus Rhodum tenuit*. Amadeus VIII. changed the image of St. Maurice, patron of Savoy, which hung at the collar, for that of the Virgin Mary, and instead of the motto above mentioned, substituted the

words of the angel's salutation. Now extinct.

Anse des Pieces (*Fr.*). A term for the handles of cannon. Those of brass have two, those of iron seldom any. These handles serve to pass cords, handspikes, or levers through, the more easily to move so heavy a body, and are made to represent dolphins, serpents, etc.

Antandros (now *St. Dimitri*). A city of Troas, inhabited by the Leleges, near which Æneas built his fleet after the destruction of Troy.

Antecessores, or **Antecursores**. Light cavalry of the Romans, which formed the advance-guard of an army while on the march.

Antemuraille. In ancient military art, denoted what now the moderns generally call the outworks.

Antepilani. Soldiers of a Roman legion who composed the first and second ranks in line of battle, and who were accordingly placed in front of the third rank. The first rank was called *hastati*, the second *principes*, and the third *pilani*, or *triarii*.

Antequera. A city in Spain, formerly fortified; besieged and captured from the Moors by Ferdinand of Castile, September 16, 1410; he also defeated under the walls of this city the Moorish king of Toledo, who had an army of 100,000 men.

Antesignani. A name given to the soldiers of the Roman army who protected the colors, etc.; according to some authorities they were the *hastati* or *principes*, and according to others they were a select detachment consisting of picked soldiers.

Antestature (*Fr.*). A small intrenchment or work formed of palisades or sacks of earth.

Anthony, St., Knights of. A military order instituted by Albert, Duke of Bavaria, Holland, and Zealand, when he designed to make war against the Turks in 1382. The knights wore a collar of gold made in the form of a hermit's girdle, from which hung a stick like a crutch, with a little bell, as they are represented in St. Anthony's pictures.

Antibes. A city in the department of Alpes Maritimes, France. It was ruined some time after the capture of Marseilles by Cæsar. This city was fortified by Francis I. and Henry IV.; besieged without success by the Imperials in 1746.

Anti-corrosion. A lacker applied to iron traversing platforms, gun-carriages, and the outside of guns. See **LACKER**.

Antietam. A small, deep river in Maryland, which empties into the Potomac about 6 miles above Harper's Ferry. Here was fought a terrible battle on September 17, 1862, between the Federals, under Gen. McClellan, and the Confederates, under Gen. Lee. After his victory at Bull Run, August 30, Lee invaded Maryland, and was immediately followed by McClellan. On September 16, Lee was joined by Jackson. The battle

on which was staked "the invasion of Maryland," in the view of the Federal government, but in reality the sovereignty of the Union, was near at hand. On the night of the 15th the greatest part of McClellan's troops were in bivouac behind the heights on the left bank of the Antietam, sheltered from, but within range of, the enemy's batteries. The morning of the 16th was occupied in reconnoissance of the enemy's position, in rectifying the position of the Federal troops, and perfecting the arrangements for the attack. At about 8 o'clock P.M. Gen. Hooker crossed the Antietam by the bridge in the village on the Hagerstown road, and an adjacent ford, and soon gained the crest of the height on the right bank of the stream. He then turned to his left and followed down the ridge under a strong opposition, until brought to a standstill by the darkness. Gen. Mansfield was ordered to follow Gen. Hooker, so as to be in a position to support him at daybreak.

At daybreak on the 17th, Gen. Hooker attacked the forces in his front, and for a time drove them before him. The enemy, however, rallying, and strengthened from their supporting columns, repulsed him. Gen. Mansfield's corps was then drawn to Hooker's support, and the two masses repelled the enemy. Gen. Mansfield was killed and Gen. Hooker wounded at this crisis, and obliged to withdraw from the field. Gen. Sumner's corps soon reached this portion of the field and became hotly engaged. This corps suffered greatly at this period of the contest, Gens. Sedgwick and Crawford being wounded, and portions of the line were compelled to fall back. The enemy, however, were checked by the Federal artillery. Sumner's corps was soon reinforced, and the lost ground was recovered. The contest in the mean time on the right was most obstinate, and the losses in this part of the field were very heavy. Gen. Burnside's corps, on the left, was ordered early in the day to carry the bridge across the Antietam and to attack the enemy's right. The approaches to the bridge being in the nature of a defile, and being swept by batteries of the enemy, the opposite bank of the Antietam was only reached after a severe struggle. It was afternoon before the heights were in his possession. The enemy were driven back, and a portion of their line in disorder. By the most desperate efforts, however, the enemy rallied their retreating regiments, strengthened their lines with all their available fresh troops, and opened batteries on the hills.

Gen. Burnside could not maintain his advantage, and was obliged to withdraw from the extreme position which he had gained to one slightly in rear. He, however, held his bank of the river completely, and maintained much ground beyond it which he had taken from the enemy. During the advance on the left Gen. Rodman was wounded.

Notwithstanding substantial and decided

successes of the day, the Federal forces had suffered so severely during the conflict, having lost 11,426 killed and wounded, and among them many general and superior officers, that it was deemed prudent by Gen. McClellan to reorganize and give rest and refreshment to the troops before renewing the attack. The 18th was accordingly devoted to those objects. On the night of the 18th, however, Gen. Lee withdrew his forces hastily across the Potomac, abandoning further contest with the Union forces, and yielding all hopes of further remaining on Maryland soil. The Confederate army is supposed to have lost nearly 80,000 men during its brief campaign in Maryland. The Federal forces captured 89 colors, 18 guns, more than 15,000 small-arms, and more than 6000 prisoners.—*Extracts from D. Appleton's "History of the Rebellion," by Tenney, "Lippincott's Gazetteer," and Haydn's "Dates."*

Antioch. A city in Syria, built by Seleucus 300 B.C.; after the battle of Ipsus it acquired the name "Queen of the East." Here the disciples were first called Christians, A.D. 42. Antioch was taken by the Persians, 540; by the Saracens about 638; recovered from the Eastern emperor, 966; lost again in 1086; retaken by the Crusaders in 1098, and held by them till 1268, when it was captured by the sultan of Egypt. It was taken from the Turks in the Syrian war, Aug. 1, 1833, by Ibrahim Pasha, but restored at the peace.

Antium. A maritime city of Latium, now *Porto d'Anzio*, near Rome; after a long struggle for independence it became a Roman colony at the end of the great Latin war, 340–38 B.C. The treasures deposited in the Temple of Fortune here were taken by Octavius Cæsar during his war with Antony in 41 B.C.

Antonia. A fortress in Jerusalem on the north side of the area of the temple, originally built by the Maccabees under the name of *Baris*, and afterwards rebuilt with great strength and splendor by the first Herod. The fortress communicated with the northern and western porticoes of the temple area, so that the garrison could at any time enter the courts of the temple and prevent tumults. Josephus describes it as standing on a rock 50 cubits high, and having everything necessary within itself.

Antustriones. A body-guard of the kings or chiefs of the ancient Germans, which was composed of volunteers.

Antwerp (*Fr. Anvers*). The principal port of Belgium; is mentioned in history in 517; it was pillaged and burnt by the Spaniards and the inhabitants massacred, November 4, 1576. This event has been termed the "Spanish Fury." After Marlborough's victory at Ramillies, Antwerp surrendered at once, June 6, 1706; the Barrier treaty concluded here, November 16, 1715; taken by Marshal Saxe, May 9, 1746; occupied by the French, 1792–94 and 1814.

The Belgian troops, having entered Antwerp, were opposed by the Dutch garrison, who, after a dreadful conflict, being driven into their citadel, cannonaded the town with hot shot and shells, October 27, 1830; the citadel was bombarded by the French, December 4; surrendered by Gen. Chasse, December 28, 1832. The exchange burnt, archives, etc., destroyed, August 2, 1858; fortification completed, 1865.

Anvil. An archaism for the handle or hilt of a sword. Also, a little narrow flag at the end of a lance.

Anvil. The resisting cone, plate, or bar against which the fulminate in a metallic cartridge is exploded. See **PRIMER**.

Aosta. A town in Piedmont, which was captured by the Romans in 24 B.C.

Aous, or Aças (now the *Voyussa*). A river in Epirus, Greece, which flows into the Adriatic Sea; on the banks of this river Philip of Macedon was twice defeated by the Romans.

Apaches. A warlike tribe of savage Indians who infest New Mexico and Arizona. Until within a few years they were hostile, making frequent raids into the neighboring Mexican states of Sonora and Chihuahua, and robbing and murdering the settlers. They are now peaceable, and settled on reservations (with the exception of a few renegades); but being entirely uncivilized, their peaceful condition is uncertain. See **INDIANS AND THEIR AGENCIES**.

Aparejo. A kind of pack-saddle used in the American military service. See **PACK-SADDLES**.

Apex. The tip, point, or summit of anything. The Romans so named the crest of a helmet, or the part whereon the horse-hair plume was attached.

Aphracti. In the ancient military art, open vessels, without decks or hatches, furnished only at head and stern with cross-planks, whereon the men stood to fight.

Apobates. A name given by the ancients to warriors who fought mounted on chariots; they were also called *Anabates*, or *Paraebates*; they were generally leaders who fought in this manner; their armor and arms consisted of helmet, breast-armor, lance, javelin, sword, and shield. These warriors occasionally alighted from the chariots to attack their adversaries on foot.

Apology. In a military sense, when made and accepted, debars the officer who accepts from bringing forward the matter as a substantive accusation. See **APPENDIX, ARTICLES OF WAR, 25**.

Apomaque. This word, with the Grecians, signified those soldiers who were disqualified for military service from physical disability or other causes.

Appalachee Indians. A tribe of Indians once powerful in West Florida. In 1700 a part of them removed into what is now Alabama, and the tribe soon ceased to exist.

Apparatus. Ammunition and equipage for war.

Appareilles. Are those slopes that lead to the platform of the bastion.

Appastis, or Pactis. A war-tax, which was levied in ancient times upon the inhabitants of conquered countries.

Appeal. See APPENDIX, ARTICLES OF WAR, 29, 30.

Appel (Fr.). A smart stroke with the blade by a fencer on the sword of his antagonist on the opposite side to that which he engaged, generally accompanied with a stamp of the foot, and used for the purpose of procuring an opening.

Appian Way. A Roman road, made by Appius Claudius Cæcus, while censor, 312 B.C.

Appointe (Fr.). This word was applicable to French soldiers only, during the old monarchy of France, and meant a man who for his service and extraordinary bravery received more than common pay. There were likewise instances in which officers were distinguished by being styled *officers appointes*.

Appointing Power. It has been contended by advocates of executive discretion, that army appointments are embraced in the power granted to the President in the 2d section of the Constitution, to nominate, and, by and with the advice and consent of the Senate, appoint "all other officers of the United States, whose appointments are not herein otherwise provided for, and which may be established by law. But the Congress may, by law, vest the appointment of such inferior officers as they think proper in the President alone, in the courts of law, or in the heads of departments." If due regard, however, be paid to the words "*whose appointments are not herein otherwise provided for,*" the pretension set up in favor of executive power will receive no support from the terms of the Constitution. The powers granted to Congress to raise and support armies, and to make all rules for the government and regulation of the land and naval forces, are necessarily so comprehensive in character, as to embrace all means which Congress, according to circumstances, may deem proper and necessary in order to raise armies, or govern them when raised. Rules of appointment to office, rules of promotion,—another form of appointment,—and all rules whatever in relation to the land and naval forces, save the appointment of the commander-in-chief of those united forces, who is designated by the Constitution, are hence within the competency of Congress.

Appointment. Office, rank, or employment.

Appointment. The equipment, ordnance, furniture, and necessaries of an army.

Appointments, Military. The accoutrements of an officer.

Appointon (Fr.). A sort of poniard which was used in ancient times.

Apprehend. In a military sense, implies the seizing or confining of any person; as, to apprehend a deserter, etc.

Apprenti (Fr.). Apprentice. Formerly in the French service they had apprentices or soldiers among the artillery, who served for less pay than the regular artillerymen, until they became perfect in their profession, when they were admitted to such vacancies as occurred in their respective branches.

Approach. The route by which a fortified place or military position can be approached by an attacking force.

Approaches. The trenches or covered roads by which the besiegers convey ordnance, ammunition, and stores, and march troops to and from the parallels; also the trenches by means of which the successive parallels are established.

Appropriations. For the support of the U. S. army are made annually; the bill for the same must originate in the lower house of Congress. The English army is raised by the queen, and maintained by annual appropriations by Parliament; the system for the support of armies is much the same throughout Europe. In the United States, the term is also used by post and regimental councils of administration in the expenditure of funds.

Appui. See POINT D'APPUI.

Apri, or Apros. A small town in Thrace, on the river Melas, where the daring leader of the Catalonians, Berengar de Rocafort, defeated the Greeks under the Emperor Michael, 1307.

Apron. A piece of sheet-lead used to cover the vent of a cannon.

Apulia. A province in Southeast Italy, conquered by the Normans, whose leader, Guiscard, received the title of Duke of Apulia from Pope Nicholas II. in 1059. After many changes of masters, it was absorbed into the kingdom of Naples in 1265.

Aqueduct. A channel to convey water from one place to another. Aqueducts in military architecture are generally made to bring water from a spring or river to a fortress, etc.; they are likewise used to carry canals over low ground, and over brooks or small rivers; they are built with arches like a bridge, only not so wide, and are covered by an arch, to prevent dust or dirt from being thrown into the water,—there are also subterranean aqueducts, such as pipes of wood, lead, or iron.

Aquila (Southern Italy). Near here the Aragonese, under the condottiere Braccio Fortebraccio, were defeated by the allied Papal, Neapolitan, and Milanese army under Jacob Caldora, June 2, 1424. Braccio, a wounded prisoner, refused to take food, and died, June 5.

Aquila. The principal standard of a Roman legion. The standard of Romulus is said to have consisted of a handful of hay, straw, or fern, affixed to a pole or spear; whence the company of soldiers who served under it was called *Manipulus*. This primitive standard was soon superseded by the

figures of animals. In 104 B.C. the eagle was permanently adopted; it was made of silver or bronze, and was represented with expanded wings.

Aquilifer. A name given by the Romans to the officers who carried the eagles of the legions.

Aquitaine. A province in the southwest of France; conquered by the Romans in 28 B.C.; by the Visigoths, 418; taken from them by Clovis in 507. Henry II. of England obtained it with his wife Eleanor, 1152. It was erected into a principality for Edward the Black Prince in 1362; but was annexed to France in 1370. The title of duke of Aquitaine was taken by the crown of England on the conquest of this duchy by Henry V. in 1418. The province was lost in the reign of Henry VI.

Arabia. A tract of land in Western Asia; the terms *Petræa* (stony), *Felix* (happy), and *Deserta* are said to have been applied to its divisions by Ptolemy, about 140. Arabia was unsuccessfully invaded by Gallus, the Roman governor of Egypt, 24 B.C. In 622, the Arabians under the name of Saracens (which see), followers of Mohammed, their general and prophet, commenced their course of conquest. The Arabs greatly favored literature and the sciences, especially mathematics, astronomy, and chemistry. To them we owe our ordinary (*Arabic*) numerals and arithmetical notation.

Aracillum. A city in Spain. The Cantabrians being besieged in this city by the Romans, killed each other rather than surrender.

Aradus (now *Rund*). A city of Phœnicia; captured by the Roman general Ventidius, 38 B.C.

Aragon. Part of the Roman Tarraconensis, a kingdom, Northeast Spain, was conquered by the Carthaginians, who were expelled by the Romans about 200 B.C. It became an independent monarchy in 1085.

Aranjuez (Central Spain). Contains a fine royal palace, at which several important treaties were concluded. On March 17, 1808, an insurrection broke out here against Charles IV. and his favorite, Godoy, the Prince of Peace. The former was compelled to abdicate in favor of his son, Ferdinand VII., March 19.

Aranzas. A small river of Texas, which empties into a bay of the same name, immediately north of Corpus Christi Bay. The Confederate works near this place were captured by the Federal troops November 20, 1864.

Arapahoe Indians. A tribe of Indians associated with the Cheyennes, who inhabit the country between the South Fork of the Platte River and the head-waters of the Arkansas. See INDIANS AND THEIR AGENCIES.

Arapiles. A village of Spain, 4 miles southeast of Salamanca. It was the scene of the sanguinary engagement called the

battle of Salamanca, in which the allies under Wellington defeated the French under Marmont, July 22, 1812.

Arausio (now *Orange*, Southeast France). Through jealousy of the Roman proconsul Q. Servilius Cæpio, who would not wait for the arrival of the army of the consul C. Manlius, both were here defeated by the Cimbri with much slaughter, 105 B.C.

Arbalest. In the ancient art of war, a cross-bow made of steel, set in a shaft of wood, with a string and trigger, bent with a piece of iron fitted for that purpose, and used to throw bullets, large arrows, darts, etc.

Arbalestina. In the military system of the Middle Ages, was a small window or wicket through which the cross-bow men shot their quarrels or arrows at an enemy besieging a fortified place.

Arbaletrier d'une Galere (*Fr.*). That part of a galley where the cross-bow men were placed during an engagement.

Arbalist, or Arblast. A cross-bow man.

Arbela (now *Erbil*). A city in Asiatic Turkey; near here was fought the third and decisive battle between Alexander the Great and Darius Codomanus which decided the fate of Persia, October 1, 331 B.C., on a plain in Assyria, between Arbela and Gaugamela. The army of Darius consisted of 1,000,000 foot and 40,000 horse; the Macedonian army amounted to only 40,000 foot and 7000 horse. The gold and silver found in the cities of Susa, Persepolis, and Babylon, which fell to Alexander from this victory, amounted to £30,000,000 sterling; and the jewels and other precious spoil belonging to Darius sufficed to load 20,000 mules and 5000 camels.

Arbourg. A city in Switzerland, whose citadel, which was constructed in 1660, is an important depot for military stores.

Arbrier (*Fr.*). Stock of a cross-bow.

Arc (*Fr.*). A bow; an arch in building.

Arc à Jalet (*Fr.*). A small cross-bow, used to throw bullets, etc.

Arc, Elevating. In gunnery, is an arc attached to the base of the breech parallel to the ratchets and graduated into degrees and parts of a degree. A pointer attached to the fulcrum points to the zero of the scale when the axis of the piece is horizontal. Elevations and depressions are indicated by the scale. Besides the graduations on the arc, the ranges (in yards) and the charges for shot and shells are given.

Arch. In military architecture, is a vault or concave building, in form of a curve, erected to support some heavy structure, or passage.

Archers. In military history, a kind of militia, or soldiery, armed with bows and arrows. They were much used in former times.

Archery. The use of the bow and arrow; the practice, art, or skill of archers; the art of shooting with a bow and arrow.

Arch-gaye, or Lance-gaye (*Fr.*). A

lance used by the Gauls and Franks, which consisted of a sharp-pointed piece of iron attached to a light wooden handle.

Architonnerre (*Fr.*). A machine made of copper, which threw iron bullets with great force and noise; it was used in ancient times, being an invention of Archimedes.

Architrave. The master-beam, or chief supporter, in any part of subterranean fortification.

Arch, Triumphant. In military history, is a stately monument or erection, generally of a semicircular form, adorned with sculpture, inscriptions, etc., in honor of those heroes who have deserved a triumph.

Arcis-sur-Aube. A small town in the French department of Aube; here a battle took place on March 20, 1814, between Napoleon and the allied forces under Prince Schwartzberg. The battle, beginning with several skirmishes on the first day, and ending in a general engagement on the second day, when the French retreated over the Aube, was not in itself very important. But Napoleon now formed the plan of operating in the rear of the allies, and left the road to Paris open; assuming that they would not venture to proceed without attempting first to secure their rear. The allies marched, nevertheless, on the capital, and thus decided the campaign.

Arco. A metal composed of 70 parts of pure copper, 27 of zinc, and 3 of lead; used for the brass-work of small-arms.

Arcola (Lombardy). The site of battles between the French under Bonaparte, and the Austrians under Field-Marshal Alvinzi, fought November 15-17, 1796. The Austrians lost 18,000 men in killed, wounded, and prisoners, 4 flags, and 18 guns. The French lost about 15,000, and became masters of Italy.

Arcot (East Indies). This city (founded 1716) was taken by Col. Clive August 31, 1761; was retaken, but again surrendered to Col. Coote, February 10, 1760; besieged and taken by Hyder Ali, when the British under Col. Baillie suffered severe defeat, October 31, 1780. Arcot has been subject to Great Britain since 1801.

Arcubalist. See **ARBALEST**.

Ardalion. A river in Algeria. On the banks of this river in 398, Mascezil, a Roman general, defeated Gildo, a Moorish chieftain, then in rebellion against Rome.

Ardebil. A city in Persia; its citadel was constructed by French officers; captured by the Turks in 1827.

Ardres. A city in the department of Pas-de-Calais, France; it was dismantled in 1850. This city was captured by the Duke of Burgundy, brother of Charles V., from the English in 1377; a treaty was concluded here between Francis I. of France and Henry VIII. of England June 7, 1546; captured by the Spaniards in 1596; returned to France in 1598.

Area. In a military sense, is the superfi-

cial contents of any rampart or other work of a fortification.

Areoscope. An instrument used for analyzing the air of rooms; used in English medical corps.

Ares. The god of war in Greek mythology, corresponding to the Roman Mars (which see).

Argaum. A village in the Deccan, near to which Gen. Wellesley (afterwards Duke of Wellington) totally defeated the army of Dawlut Rao Scindia in October, 1803.

Argelinus, or Algerinus. The Spaniards so named the foreign legion, which was sent to them from Algiers by France, during the reign of Louis Philippe.

Argent. This word means silver in French, and is always used in heraldry to designate that metal. In engraving English shields the part designated as argent is left white.

Argentaria (now *Colmar*, Northern France). Where the Roman Emperor Gratian totally defeated the Alemanni and secured the peace of Gaul, 378.

Argentine Republic. Formerly the Confederation of La Plata, a South American federal republic, consisting of 14 provinces extending over an immense area of country. Buenos Ayres, one of its provinces, with the city of the same name, now the capital, seceded from the confederation in 1853, and was reunited in 1860. The country is remarkable chiefly for its internecine wars, revolutions, and struggles, incident to all the countries colonized by the Spanish race. See **BUENOS AYRES**.

Argives. The inhabitants of Argos, a state of ancient Greece of which Mycenæ was the capital, and which was ruled by Agamemnon at the time of the Trojan war. The name is frequently used by Homer to signify the whole body of the Greeks.

Argos (now *Panitzza*). An ancient city of Greece; near here, in 272 B.C., Antigonus Gonatas, king of Macedon, defeated the army of Pyrrhus, king of Epirus; the latter was killed.

Argoulet (*Fr.*). An ancient dragoon. Also an inferior sort of a musket made at Liege for trading with the negroes.

Arich (anc. *Rhinocolura*). A fortress in Lower Egypt. The French occupied this place in 1793, but were obliged to surrender it in 1800.

Aries (*Lat.* "a ram"). An ancient battering-ram. See **BATTERING-RAM**.

Arizona. A Territory of the United States, originally part of New Mexico, organized February, 1863. For many years known for its Indian hostilities, and conflicts between the Indians and U. S. troops; also for frequent terrible massacres of whites.

Arkansas. One of the Southwestern States of the Union. It was settled by the French in 1685, and formed a part of the great tract purchased from the French in 1803 under the name of Louisiana Territory. It was organized as a Territory in 1819, and ad-

mitted as a State in 1836. Arkansas passed an ordinance of secession March 4, 1861; was the scene of several engagements during the civil war, and suffered its share of the hardships of that eventful period. The battles of Pea Ridge and Fayetteville were fought in its territory; Arkansas Post was captured in 1863; and Helena and Little Rock were taken the same year.

Arkansas Indians. A tribe of Indians allied to the Dakotas, who formerly resided on the Ohio. At present they number about 200, and live in the Indian Territory.

Arkansas Post. A village in Arkansas, on the Arkansas River, about 40 miles from its mouth, garrisoned by the Confederates during the civil war. The combined forces of Admiral Porter and Gen. McClernand made an attack upon the place January 11, 1863, and carried it by storm.

Arklow. A town in Ireland, where a battle was fought between the insurgent Irish, amounting to 81,000, and a small regular force of British, which signally defeated them, June 10, 1798.

Arlés. A city in the department Mouths-of-the-Rhone, France; said to have been founded 2000 B.C.; was formerly a powerful Roman city; sustained four memorable sieges against the Visigoths, in 425, 429, 452, and 457; besieged by Clovis I., king of the Franks, 508. The Count of Barcelona took possession of it in 1156, and Alfonso II., king of Aragon, in 1167.

Arlon. A town in the province of Luxembourg, Belgium. Here the French, commanded by Jourdan, defeated the Austrians in April, 1798, and again in April, 1794.

Arm. In a military sense, signifies a particular species of troops,—thus the artillery is an arm, and the cavalry, and infantry, etc., are each called an arm of the service. The word is also used to denote an instrument of warfare; a weapon of offense or defense.

Arm. To be provided with arms, weapons, or means of attack or resistance; to take arms.

Armament. A body of forces equipped for war;—used as a land force. All arrangements made for the defense of a fortification with musketry and artillery.

Armamentary. An armory; a magazine or arsenal.

Arm a Shot, To. Is to roll rope-yarns about a cross-bar shot in order to facilitate ramming it home, and also to prevent the ends catching any accidental inequalities in the bore.

Armatóles. A Grecian militia of Thessaly, instituted by Selim I. at the beginning of the 16th century, to oppose the raids of the mountaineers called *klephtes*, or brigands. Later the Armatóles and Klephtes united against the Turks.

Armatura. In ancient military history signified the fixed and established military exercises of the Romans. Under this word is understood the throwing of the spear,

javelin, shooting with bows and arrows, etc. *Armatura* was also an appellation given to the soldiers who were light-armed; and was a name also given to the soldiers in the emperor's retinue.

Armature. Armor; whatever is worn or used for the protection and defense of the body.

Arm-chest. A portable locker for holding arms, and affording a ready supply of pistols, muskets, or other weapons. Also used in the military service for the transportation of rifles, revolvers, etc.

Arme Courtoise (Fr.). This arm was used in tilts or tournaments during the Middle Ages; it was a kind of sword with a ring or knob placed at the tip of the blade to prevent it causing a dangerous wound.

Armed. Furnished with weapons of offense or defense; furnished with the means of security or protection; furnished with whatever serves to add strength, force, or efficiency. *Armed neutrality*, the condition of affairs when a nation assumes a threatening position, and maintains an armed force to repel any aggression on the part of belligerent nations between which it is neutral.

Armentiers. A city of the department of the North, France; captured and burned by the English, 1839; pillaged by the French, 1882; destroyed by the Calvinists in 1666; occupied by Marshals de Gassion and de Rantzau, 1645; by Archduke Leopold, 1647; by the French in 1667, and remained a city of France in accordance with the peace treaty of Aix-la-Chapelle in 1668.

Armes de Jet (Fr.). Missive weapons; offensive arms or instruments which act by propulsion, whether by the force of powder, steam, wind, or mechanism.

Armet (Fr.). A helmet or head-piece much in use in the 16th century, and worn with or without the beaver.

Armgaunt. Worn by military service; as, an armgaunt steed.

Armiger. Formerly an armor-bearer, as of a knight; an esquire who bore his shield and rendered other services. In later use, one next in degree to a knight, and entitled to a coat of arms.

Armilausa. A military uniform coat, worn by the Romans over their armor.

Armiludia. A name given by the Romans to the exercises of arms, and also applied to the day on which these exercises took place.

Armilustrum. This name was given by the Romans to a military festival which took place on the 19th of October annually. After review the soldiers offered up sacrifices for the success of the Roman arms.

Armipotent. Powerful in arms; mighty in battle.

Armisonous. Rustling in arms; resounding with arms.

Armistice. A cessation of hostilities between belligerent nations for a considerable time. It is either partial and local, or general. It differs from a mere suspension of

arms, which takes place to enable the two armies to bury their dead, their chiefs to hold conferences or pourparlers, and the like. The terms *truce* (see *TRUCE*) and *armistice* are sometimes used in the same sense.

Armless. Without arms or armor.

Armlet. The name of a piece of armor for the arm, to protect it from the jar of the bow-string.

Armor. Defensive arms for the body; any clothing or covering worn to protect one's person in battle. In English statutes, armor is used for the whole apparatus of war, including offensive as well as defensive arms. The *statutes of armor* directed what arms every man should provide. Armor has also been extensively used in England in plating important fortifications as those of Portsmouth, and also in Germany for the forts along the frontier.

Armor-bearer. One who carries the armor of another; an armiger; an esquire.

Armorer. The person who makes, cleans, or repairs arms.

Armorial. Belonging to armor, or to the arms or escutcheon of a family.

Armor Plates. From experiments of the effects of shot and shell on armor plates in England, the following results have been obtained: Where it is required to perforate the plate, the projectile should be of hard material, such as steel, or chilled iron, and the form best suited for this purpose is the pointed ogeeal. The resistance of wrought-iron plates to perforation by steel projectiles varies as the squares of their thickness. Hitting a plate at an angle diminishes the effect as regards the power of perforation in the proportion of the sine of the angle of incidence to unity. The resistance of wrought-iron plates to perforation by steel shot is practically not much, if at all, increased by backing simply of wood, within the usual limits of thickness; it is, however, much increased by a rigid backing either of iron combined with wood, or of granite, iron, brick, etc.

Till quite recently armor plates have been made of wrought iron only, as numerous experiments in England had served to show that notwithstanding the enormous resistance of steel to penetration it was unfit for armor plating,—the damage from the impact of shot not being localized as in wrought iron. The Italians were led, however, by the experiments with the 100-ton gun on targets of both metals at Spezzia, 1876, to adopt steel for their new ships, the "Duilio" and "Dandolo." Since that time an armor compounded of steel and wrought iron has been introduced in England which bids fair to supersede all others. It is made by casting a heavy facing of steel upon wrought-iron plates. A section of this compound armor exhibits a gradual change of structure from the hard steel face to the soft iron backing. Its resistance to penetration is equal to steel, while in toughness and endur-

ance under the blows of shot it resembles wrought iron.

To glance at some of the heaviest armor plating afloat, the English "Inflexible" carries a maximum thickness of 24 inches of iron, the Italian frigates mentioned above 21.6 of steel, the French "Admiral Duperré" 21.6 of iron, the Russian "Peter the Great" 14 inches of iron. In regard to the power of some of the most noted of modern guns, the 12-inch calibres used now by all leading nations will penetrate, at 1000 yards, 16 to 18 inches of iron. The 38-ton English gun of this calibre has penetrated (at shorter range) 22 inches of iron and 6 inches of teak backing. The 80-ton Woolwich gun will penetrate 28 inches of iron at 1000 yards. The largest Krupp, 72 tons, will penetrate 26 inches, and the 100-ton Armstrong 30 inches at the same distance. None of the guns mentioned would penetrate at a single shot the steel armor of the Italian ships, but any of them would destroy it in a number of rounds.

Armory. A manufactory, or place of deposit for arms. See *ARSENAL*.

Armory, National. The U. S. government establishment for the manufacture of small-arms at Springfield, Mass.

Arm-rack. A frame or fitting for the stowage of arms (usually vertical) out of harm's way, but in readiness for immediate use. In the conveyance of troops by sea arm-racks form a part of the proper accommodation. Arm-racks are also used in soldiers' barrack-rooms.

Arms. In a general sense, comprehend weapons both of an offensive and defensive character, but in the usual restricted sense they only embrace the former, and in modern warfare include the gun and bayonet, the rifle, the pistol, the carbine, the sword, the lance, cannon, etc., all of which are noticed under their respective heads. For punishment inflicted upon soldiers who sell or otherwise dispose of their arms, see *APPENDIX, ARTICLES OF WAR, 17*.

Arms. This term is used in heraldry to designate the devices borne on shields, and includes all the accompaniments, such as the crest, helmet, supporters, etc.

Arms, Bells of. Are tents, used in the English service, mostly of a conical shape, for containing the small-arms for each company in a regiment of infantry. The tent is frequently painted with the color of the facings of the regimental uniforms.

Arms, Stand of. A complete set for one soldier, as a rifle and bayonet, cartridge-box and belt, frequently the rifle and bayonet alone.

Armstrong Gun. The Armstrong gun as a breech-loading field-piece first attracted attention in England about 1850. About 1858 it was adopted by the British government. This gun was made of wrought iron, and consisted of a single coiled tube reinforced at the breech with two thin tubes, the outer one being a coiled tube, the inner

being formed by bending a plate and welding the edges. The coiled tubes were formed by bending square bars of iron around a mandrel and welding the coils together. Tubes made in this way offer great resistance to tangential strains. The intermediate tube was designed to take up the longitudinal strain near the breech, and for this reason was made differently. The breech was closed with a vent-piece, slipped by the hand into a slot cut in the piece near the breech, and held in its place by a breech-screw, which supported it from behind. This screw was made in the form of a tube, so that its hollow formed a part of the bore prolonged, when the vent-piece was drawn. Through the hollow screw the charge was passed into the chamber. The vent was formed in the breech-piece. This gun was a 3-inch 12-pounder, firing a lead-coated projectile. It was followed by the 40-pounder, 110-pounder, and other calibres. Muzzle-loaders were also made. The breech-loading apparatus did not prove entirely successful in large guns, and was accordingly discarded except for small calibres. The method of construction was changed for larger guns, and a plan adopted which has been adhered to ever since, and is that now used. The barrel or part surrounding the bore is made of steel tempered in oil; that portion at and in rear of the trunnions is enveloped by several layers of wrought-iron tubes, the number of layers depending upon the size of the gun. These tubes, instead of being joined at their ends by welding, are hooked on to each other by a system of shoulders and recesses. There are also projections fitting into corresponding recesses, which serve to prevent the tubes from slipping within each other. The tube which immediately surrounds the barrel opposite to the seat of the charge is called the breech-piece. It is made with its fibres and welds running longitudinally, so as to resist the recoil of the barrel against the head of the breech-plug, which is screwed into the breech-piece. The shunt system of rifling was first applied to muzzle-loading Armstrong guns, which have fewer grooves than the breech-loaders. The method of manufacturing originally proposed by Sir William Armstrong has been greatly modified by Mr. Fraser, of the Royal Arsenal, Woolwich. (See **ORDNANCE, ARMSTRONG CANNON**). For some years large numbers of Armstrong guns were made at the Royal Arsenal, Woolwich, under the supervision of the inventor. His works are now located at Elswick, Newcastle-upon-Tyne, and are known as the Elswick Ordnance Works. To distinguish the system of gun-construction from the "Woolwich," which it closely resembles, it is frequently called the "Elswick" system. The largest, as well as the most powerful guns ever made, are the 100-ton guns manufactured at Elswick for the Italian navy. See **CANNON AND ORDNANCE, MODERN HISTORY OF**.

Armstrong Projectile. See **PROJECTILE**.

Army. A large and organized body of soldiers, consisting of infantry, cavalry, and artillery, completely armed, and provided with the necessary stores, etc., the whole being composed of companies, battalions, regiments, brigades, divisions, and corps, under proper officers, and the entire force being under the direction of one general, who is called the general-in-chief, and sometimes the *generalissimo*. Armies are distinguished by different appellations; as, a *covering army*, a *blockading army*, an *army of obstruction*, an *army of reserve*, a *flying army*, etc. An army is said to *cover* a place when it is encamped or in cantonments for the protection of the different passes which lead to a principal object of defense. An army is said to *blockade* a place when, being well provided with heavy ordnance and other warlike means, it is employed to invest a town for the direct and immediate purpose of reducing it by assault or famine. An *army of obstruction* is so called because by its advanced positions and desultory movements it is constantly employed in watching the enemy. A *flying army* means a strong body of horse and foot, which is always in motion, both to cover its own garrisons and keep the enemy in continual alarm. For method of providing for armies, see **APPROPRIATIONS**.

Army Corps. See **CORPS D'ARMÉE**.

Army Regulations. This is the name of a work published by the War Department embodying all the acts of Congress, and the rules laid down by the President for the management of the army, both in peace and war. See **REGULATIONS**.

Arnauts, or Arnouts, Corps des. Militia of Greece organized during the war of Russia against the Porte in 1769.

Arnheim. A fortified city in Holland; it was captured by the French in 1672; taken by storm by the Prussians under Gen. Von Bulow in 1815.

Arnott's Pump. An ingeniously arranged machine for forcing pure air into buildings.

Arquebusade. Shot of an arquebuse. Also distilled water from a variety of aromatic plants, as rosemary, millefoil, etc., applied to a bruise or wound; so called because it was originally used as a vulnerary in gunshot wounds.

Arquebuse, or Harquebuse. An old firearm resembling a musket, which was supported on a rest by a hook of iron fastened to the barrel. It was longer than a musket, and of large calibre, and formerly used to fire through the loop-holes of antique fortifications.

Arquebusier. A soldier armed with an arquebuse.

Arques (Northern France). Near here the league army, commanded by the Duc de Mayenne, was defeated by Henry IV., September 21, 1589.

Arracan. A province of Northeast India. Arracan, the capital, taken by the Burmese, 1783; was taken from them by

Gen. Morrison, April 1, 1825. The subjugation of the whole province soon followed.

Arrah. A town in British India, in the presidency of Bengal, the scene of several exciting incidents in the Indian mutiny. The English troops gained a victory here over the mutinous Sepoys in 1857.

Arras (Northeast France). The ancient *Atrebat*; conquered by Cæsar in 50 B.C.; captured and sacked by the Vandals in 407; captured by the Normans in 880; besieged by Charles VI. in 1414; captured by Louis XI.; held by the Austrians from 1498 till 1640, when it was taken by Louis XIII.; besieged by the Spaniards in 1654.

Arrawak Indians. A race or collection of tribes of Indians in Guiana, who were formerly numerous and powerful.

Array. Order; disposition in regular lines; hence, a posture for fighting; as, drawn up in battle array.

Arrayer. In some early English statutes, an officer who had care of the soldiers' armor, and who saw them duly accoutred.

Arrest. The temporary confinement of officers in barracks, quarters, or tents, pending trial by court-martial, or the consideration of their imputed offenses previous to deciding whether they shall or shall not be tried. (See APPENDIX, ARTICLES OF WAR, 65.) Private soldiers are usually placed under guard; by the custom of the service non-commissioned officers may be simply placed in arrest in quarters.

Arrest (*Old Fr.*, now *arret*). A French phrase, similar in its import to the Latin word *retinaculum*; it consisted of a small piece of steel or iron, which was formerly used in the construction of fire-arms, to prevent the piece from going off. A familiar phrase among military men in France is, *Ce pistolet est en arret*, "this pistol is in arrest or is stopped."

Arreste of the Glacis. Is the junction of the talus which is formed at all the angles.

Arretium. A city of the Gauls, now in the department of the Yonne, France, where the Gauls defeated the Romans in a bloody battle in 284 B.C.

Arrow. In fortification, a work placed at the salient angles of the glacis, communicating with the covert way.

Arrow. A missile weapon of defense, straight, slender, pointed, and barbed, to be shot with a bow.

Arrow-head. The head of an arrow.

Arrow-wood. A species of *Viburnum*, from the long straight stems of which the Indians dwelling between the Mississippi and the Pacific make their arrows.

Arrowy. Consisting of arrows.

Arroyo del Molinos. A small town in Estremadura, Spain, near the river Guadiana, where Lord Hill, on the 28th of October, 1811, surprised and defeated the French under Gen. Gerard. Nearly 1500 prisoners were taken, including Prince d'Arémburg,

Gen. Brun, one colonel, two lieutenant-colonels, a commissaire de guerre, and no less than 30 captains and inferior officers. It was altogether a most brilliant achievement.

Arsenal. A public establishment for the storage or for the manufacture and storage of arms and all military equipments, whether for land or naval service. In the United States there are 17 arsenals and 1 armory (Springfield, Mass.), situated at different points throughout the whole country convenient for the distribution of *materiel*, as follows: Alleghany arsenal, at Pittsburg, Pa.; at Augusta, Ga.; Benicia, Cal.; Fort Monroe, Va.; Fort Union, N. M.; Frankford arsenal, Philadelphia, Pa.; Indianapolis, Ind.; Kennebec arsenal, Augusta, Me.; New York; Pikesville, Md.; Rock Island, Ill.; Jefferson Barracks, Mo.; San Antonio, Texas; Vancouver, W. T.; Washington, D. C.; Watertown, Mass.; and Watervliet arsenal, West Troy, N. Y.

Arsouf (Syria). At a battle here Richard I. of England, commanding the Christian forces, reduced to 30,000, defeated Saladin's army of 300,000 and other infidels on September 6, 1191. Ascalon surrendered, and Richard marched to Jerusalem, 1192.

Art, Military. Military art may be divided into two principal branches. The first branch relates to the order and arrangement which must be observed in the management of an army, when it is to engage an enemy, to march, or to be encamped. This branch is called *tactics*. The same appellation belongs to the other branch of military art, which also includes the composition and application of warlike machines. See LOGISTICS, STRATEGY, STRATAGEM, TACTICS, and WAR.

Arta, or Narda. A town in Albania. The Greek insurgents against the Porte were defeated here, July 16, 1822.

Artaxata. The ancient capital of Armenia; burned by the Roman general Carbo, about 59.

Artemisium. A promontory in Eubœa, near which indecisive conflicts took place between the Greek and Persian fleets for three days, 480 B.C. The former retired on hearing of the battle of Thermopylæ.

Articles of War. Are known rules and regulations, fixed by law, for the better government of an army. The articles of war of the United States consists of 128 articles. (See APPENDIX, ARTICLES OF WAR.) All that relates to the army not comprehended therein is published in general orders or in established regulations, issued from time to time from the War Department, copies of which are furnished and read to the troops. In England they may be altered and enlarged at the pleasure of the sovereign, but must be annually confirmed by Parliament under the Mutiny Act.

Artifice. Among the French, is understood as comprehending everything which

enters the composition of fire-works, as the sulphur, saltpetre, charcoal, etc. See **Pyrotechnics**.

Artificer. One who makes fire-works, or works in the artillery laboratory, and prepares the shells, fuzes, grenades; etc. It is also applied to military mechanics, such as carpenters, blacksmiths, masons, etc.

Artificial Line of Sight. Is the right line from the eye to the object to be hit, passing through the front and rear sights. See **POINTING**.

Artillery. In a general sense, signifies all sorts of great guns or cannon, mortars, howitzers, petards, and the like, together with all the apparatus and stores thereto belonging, which are not only taken into the field, but likewise to sieges, and made use of both to attack and defend fortified places; also the officers and men of that branch of the army to which the care and management of such machines have been confided. (See **ORDNANCE**.) Artillery, in a particular sense, signifies the science of artillery or gunnery, which art includes a knowledge of surveying, leveling, geometry, trigonometry, conic sections, laws of motion, mechanics, fortifications, and projectiles. See **BATTERY**, **FIELD BATTERY**, **FIELD ARTILLERY**, **SIEGE ARTILLERY**.

Artillery Company, Honorable. A band of infantry, rifles, and artillery, forming part of the militia, or city guards of London, England. It was instituted in 1585; having ceased, was revived in 1610. In the civil war, 1641-48, the company took the side of the Parliament, and greatly contributed towards its success. The company numbered 1200 in 1803, and 800 in 1861. Since 1842 the officers have been appointed by the queen. On the decease of the Duke of Sussex, in 1843, the prince consort became colonel and captain-general. He died December 14, 1861, and the Prince of Wales was appointed his successor, August 24, 1863.

Artilleryman. A man who manages, or assists in managing, large guns in firing.

Artillery-park. The camp of one or more field batteries; the inclosure where, during a siege, the general camp of foot artillery, and depots of guns, *materiel*, etc., are collected.

Artillery, Royal Regiment of. Is the collective name for the whole of the artillery belonging to the British army. There was no regular regiment or corps of artillery soldiers in the British army till the time of Queen Anne, when the present royal regiment was formed. Since that period, from some anomaly which is not easily explained, all the additions have been made to the same regiment, instead of forming new regiments, to be combined into a division or corps. The regiment is now almost an entire army in itself, and to increase the anomaly, it comprises horse as well as foot. Formerly the foot was divided into battalions and companies, and the horse into troops, but these terms have been abolished, in favor of bri-

gade and battery, which apply both to horse and foot artillery. The regiment now consists of 33,500 men, thus distributed:

| | | | |
|-------|----------------------------|-----------------------------------|------------|
| 6 | brigades, horse artillery, | 30 | batteries. |
| 8 | " | field artillery, | 82 " |
| 14 | " | garrison art., | 103 " |
| 3 | " | mixed artillery, | 19 " |
| <hr/> | | | |
| | | 214 | |
| 1 | " | coast artillery not in batteries. | |
| 1 | " | depot artillery | |

Of the above, the field, garrison, and mixed are foot artillery. This force represents from 1200 to 1800 guns fully equipped for action. Of the foot artillery, the garrison batteries are readily converted to field batteries by the addition of a few drivers.

Artillery Schools. Are special schools for instruction and training in artillery, which are organized through all civilized countries. In the United States, an artillery school was established at Fort Monroe, Va., 1867. Its object is to train both officers and enlisted men in the construction and service of all kinds of artillery and artillery material, and in gunnery and mathematics as applied in the artillery service. For artillery schools in other countries, see **MILITARY ACADEMIES**.

Artillery, Systems of. See **SYSTEMS OF ARTILLERY**.

Artillery-train. A number of pieces of ordnance mounted on carriages, with all their furniture, fit for marching.

Arx. In the ancient military art, a fort, castle, etc., for the defense of a place.

Arzegages (*Fr.*). Batons or canes with iron at both ends. They were carried by the Estradiots, or Albanian cavaliers, who served in France under Charles VIII. and Louis XII.

Asapes. An inferior class of Turkish soldiers employed in sieges to work in intrenchments and perform other pioneer duty.

Asaraouas. A tribe in Algeria against whom the French undertook an expedition in 1837.

Ascalon (Syria). A city of the Philistines which shared the fate of Phœnicia and Judea. The Egyptian army was defeated here by the Crusaders under Godfrey of Bouillon, August 12, 1099; it was besieged by the latter in 1148, taken in 1153, and again in 1191. Its fortifications were destroyed through fear of the Crusaders, by the sultan, in 1270.

Aschaffenburg. On the Main, Bavaria, Southwestern Germany; here, on July 14, 1868, the Prussians defeated the German Federal army, captured the town, and took 2000 prisoners.

Asculum (now *Ascoli*, Apulia, Southern Italy). Near it Pyrrhus of Epirus defeated the Romans 279 B.C. Asculum, a city of the Piceni, with all their country, was conquered by the Consul Sempronius 268 B.C. Andrea, general of the Emperor Henry VI., endeavoring to wrest Naples from Tancred, was defeated and slain in 1190.

Ashantees. Warlike negroes of West

Africa. In 1807 they conquered Fantee, in which the British settlement of Cape Coast Castle is situated. On the death of their king, who had been friendly to the English, hostilities began; and on January 21, 1824, the Ashantees defeated about 1000 British under Sir Charles McCarthy at Accra, and brought away his skull with others as trophies. They were totally defeated August 27, 1826, by Col. Purdon. The governor of Cape Coast Castle began a war with them in the spring of 1863; but the British troops suffered much through disease, and the war was suspended by the government in May, 1864.

Ashburton Treaty. Concluded at Washington, August 9, 1842, by Alexander, Lord Ashburton, and John Tyler, President of the United States; it defined the boundaries of the respective countries between Canada and Maine, settled the extradition of criminals, etc.

Ashdod, or Azotus. An ancient city of Judea, identified with the site of the modern *Asdood*, about 12 miles northeast of Ascalon. It is celebrated by Herodotus as having stood a siege of 29 years from Psammaticus, king of Egypt (about 680 B.C.). It was taken by the Assyrians under Tartan, the general of Sennacherib (718 B.C.); taken and destroyed by Judas Maccabeus and his brother Jonathan; restored by Gabinius, and given by Augustus to Salome.

Ashdown, or Assendune. Now thought to be Ashton, Berks, England, where Ethelred and his brother Alfred defeated the Danes in 1171.

Asia Minor. See ANATOLIA.

Askeri Mohammedize. A name given to the Turkish regular troops organized according to modern tactics.

Aslant. Formed or placed in an oblique line.

Asow. An old fortified city in Southern Russia. Towards the end of the 14th century it fell into the hands of Timur; the Turks took possession of it in 1471; captured by the Cossacks in 1687; besieged without success by the Turks in 1641, they returned the following year with a large army to attack the city, when the Cossacks, thinking it impossible to hold the city against such a force, plundered and burned it; the Turks then rebuilt the city and fortified it; it was surrendered to Peter the Great in 1696; the city again came into the Turkish possession after the peace treaty on the Pruth. In the war between Turkey and Russia, Asow was besieged by Field-Marshal Munich; it surrendered to Gen. Lasey, July 4, 1786.

Aspe. A village in the department of the Lower Pyrenees, France, where a small detachment of the French army defeated 6000 Spaniards in 1792.

Aspect. An army is said to hold a menacing aspect, when by advanced movements or positions it gives the opposing enemy cause to apprehend an attack. A

country is said to have a military aspect, when its general situation presents appropriate obstacles or facilities for an army acting on the offensive or defensive. An army is said to have an imposing aspect, when it appears stronger than it really is. This appearance is often assumed for the purpose of deceiving an enemy, and may not improperly be considered as a principal *ruse de guerre*, or feint in war.

Aspern, Great. A town near the Danube and Vienna, where a series of desperate conflicts took place between the Austrian army under the Archduke Charles, and the French under Napoleon, Massena, etc., on May 21-22, 1809, ending in the retreat of Napoleon on May 22. The loss of the former exceeded 20,000 men, and of the latter 80,000. The daring Marshal Lannes was mortally wounded on May 22, and died May 31. The bridge of the Danube was destroyed and Napoleon's retreat endangered; but the success of the Austrians had no beneficial effect on the subsequent prosecution of the war.

Aspic (Fr.). An ancient piece of ordnance which carried a 12-pound shot; the piece itself was 11 feet long, and weighed 4250 pounds.

Aspis. A large, round, or oblong shield which was used by the heavy infantry of the ancient Grecians.

Aspromonte (Naples). Here Garibaldi was defeated, wounded, and taken prisoner, August 29, 1862, having injudiciously risen against the French occupation of Rome.

Assagai, or Assegai. An instrument of warfare among the Kaffirs.

Assail. To attack with violence, or in a hostile manner; to assault, etc. See ATTACK.

Assailable. Capable of being assailed, attacked, or invaded.

Assas-Bachi. A superior officer of janissaries, who was also administrator of the police department in Constantinople, and presided over public executions.

Assassins, or Assassinians. Fanatical Mohammedans, collected by Hassan-ben-Sabah, and settled in Persia about 1090. In Syria they possessed a large tract of land among the mountains of Lebanon. They murdered the Marquis of Montferrat in 1192, Louis of Bavaria in 1213, and the Khan of Tartary in 1254. They were exterminated in Persia about 1258, and in Syria about 1272. The chief of the corps was named "Old Man of the Mountain." They trained up young people to assassinate such persons as their chief had devoted to destruction. From them the word *assassin* has been derived.

Assault. A furious but regulated effort to carry a fortified post, camp, or fortress by personal attack, uncovered and unsupported. While an assault during a siege continues, the batteries of the besiegers cease, lest the attacking party should be injured. The party which leads the assault is sometimes called "the forlorn hope."

Assaye. A small town in the province of Bahar, in the Deccan, celebrated for a battle fought in 1803, between the British army, 4500 strong, under the Duke of Wellington, then Gen. Wellesley, and the confederated armies of India, numbering 50,000 troops; the latter were completely routed, leaving 1200 dead on the field, with nearly the whole of their artillery. Such was the battle of Assaye, which established the fame of the greatest commander of the age, and fixed the dominion of Britain over prostrate India.

Asseerghur. A strong hill fortress, situated about 12 miles northerly and easterly from Burhampoor, India. It was taken from the Mahrattas by the British on two occasions; the first time in 1803, and finally in 1819.

Asseguay. The knife-dagger used in the Levant.

Assembly. A beat of the drum or sound of the bugle as a signal to troops to assemble.

Assens. A maritime town of Denmark on the island of Funen; here Christian III. defeated his insurgent subjects in 1535.

Asser. An instrument of warfare used by the Romans on their war ships; it consisted of a heavy pole with an iron head, and was used as a battering-ram against hostile ships. Other authorities assert that it was used to destroy the rigging only.

Assessment of Damages. In the English army, is the determination by a committee of officers of the value of the injury done to the barracks each month, in order that stoppages in liquidation may be made from men who have committed the damage.

Assidui Milites. Roman soldiers who served in the army without receiving pay.

Assignment. If, upon marches, guards, or in quarters, different corps of the army shall happen to join or do duty together, the officer highest in rank of the line of the army, marine corps, or militia, by commission, there on duty or in quarters, shall command the whole, and give orders for what is needful to the service, unless otherwise specially directed by the President of the United States, according to the nature of the case. See APPENDIX, ARTICLES OF WAR, 122.

Assignment of Pay. By a non-commissioned officer or private, previous to discharge, is invalid. A transfer subsequent to the discharge is valid.

Assinaries, or Assinaires. Festivals which were instituted at Syracuse, in commemoration of the destruction of the Athenian fleet commanded by Nicias and Demosthenes.

Assinarus (now Falunara). A small river in Sicily, near which the army of Nicias and Demosthenes was defeated 413 B.C.

Assistant. In the English army, is the third grade in any particular branch of the staff, such as the quartermaster-general's or adjutant-general's. After the principal

comes the deputy and then the assistant. In the United States it is the second grade in the staff branches of the army.

Assyria. A name which is usually appropriated to the first of what are known as the four great empires of the world, but which in geography nearly corresponds with the modern Koordistan. Its capital was Nineveh, of which the ancient ruins may still be traced. In 625 B.C., Nineveh was destroyed by Cyaxares the Mede, and Assyria became a province of Media.

Astapa (now Estepa). A city in the province of Seville, Spain; it was besieged by the Romans under Marius; the besieged slew their women and children and allowed themselves to be cut down to a man before they would surrender to the Romans.

Asta-Regia. A city of Spain (now in ruins); near here the prætor Caius Atinius gained a victory over the ancient Lusitanians, in 186 B.C.

Asti, or Asta. A city in Piedmont, Italy. Chevert took its fortress in 1745.

Astorga (anc. Asturica Augusta). A city in Spain, which was taken by the French in 1810.

Astragal and Fillets. Are the mouldings at the front end of the chase, used in the ornamental work of ordnance.

Astrakhan (Southeast Russia). Capital of a province of the same name; it was captured by the Russians in 1554; besieged by the Turks in 1569, who were defeated with great slaughter; seized by the rebel Stenko Razin in 1670, who was soon dispossessed of it by his uncle Jacolof. The province was visited and settled by Peter the Great in 1722.

Astrolabe. An instrument for observing the position of the stars, now disused. A graduated ring with sights for taking altitudes at sea was also formerly so called.

Asturias. An ancient principality in Northwest Spain. Here Pelayo collected the Gothic fugitives, about 713, founded a new kingdom, and by his victories checked Moorish conquests. In 1808 the junta of Asturias began the organized resistance to the French usurpation.

Asylum, Royal Military. A benevolent institution erected at Chelsea, Middlesex, England, for the reception and education of the children of soldiers of the regular army. The first stone was laid by the Duke of York, June 19, 1801. The direction and control of the institution are placed in the hands of commissioners appointed by her majesty, the principals of which are the commander-in-chief, the secretary of war, the master-general of the ordnance, and other high officials connected with the government. In the selection of children for admission preference, in general, is given:—First, to orphans; second, to those whose fathers have been killed, or have died on foreign service; third, to those who have lost their mothers, and whose fathers are absent on duty abroad; fourth, to those whose fathers are ordered on foreign service, or whose parents have

other children to maintain. There is also a branch establishment at Southampton, for the maintenance and education of girls.

Asylum, Military. See **SOLDIERS' HOMES.**

As You Were. A word of command corresponding to the French *remettez vous*, frequently used by drill instructors to cause a resumption of the previous position, when any motion of the musket or movement of the body has been improperly made.

Atabal. A kettle-drum; a kind of tabor, used by the Moors.

Ataghan. See **YATAGHAN.**

Ataman. A hetman, or chief of the Cossacks.

Atchevement. In heraldry, is a term nearly equivalent to arms, or armorial bearings, and is often used in its abbreviated form of *hatchment* when speaking of the arms of a deceased person as displayed at his funeral or elsewhere.

Ategar. The old English hand-dart, named from the Saxon *acton*, "to fling," and *gar*, "a weapon."

Ateгна. An important city of ancient Italy. It was taken from the Republicans by Julius Cæsar, in 45 B.C.

Atella (now *San Arpino*). A place in Italy, where the French under the Duke of Montpensier, general of Charles VIII., had to capitulate and surrender to Ferdinand II. of Naples, in 1496. The prisoners were transported to the island of Procida, where the majority of them, including the Duke of Montpensier, perished by contracting an infectious disease.

Ath. A fortified town in Belgium; it was ceded to France in 1668; fortified by Vauban; restored to the Spaniards in 1678; captured by the French under Marshal Catinat in 1697, but was restored in the same year by the peace of Ryswick. The allies under Field-Marshal d'Auvergne took it October 1, 1706. It remained in the possession of the Dutch till 1716, when it was given up to the emperor of Austria, with the remainder of the Spanish Netherlands. Louis XV. of France captured it in 1745. France lost it by the treaties of 1814-15.

Athanati. A corps of picked soldiers belonging to the ancient Persian army, 10,000 strong, which were called the "Immortals," for the reason that, as soon as one of the corps died, another was put in his place.

Athenry. A town in Galway, Ireland; near here the Irish were totally defeated, and a gallant young chief, Feidlim O'Connor, slain in 1816.

Athens. A celebrated city, the capital of the modern kingdom of Greece, situated in the plain of Attica, about 4 miles north-east of the Gulf of Ægina. It was for several ages the centre of European civilization. The city is said to have been founded by Cecrops, and afterwards enlarged by Theseus, who made it the capital of the new state which he formed by uniting into one political body the 12 independent states into which Attica had previously been divided. A new

era in the history of the city commences with its capture by Xerxes, who reduced it almost to a heap of ashes, 480 B.C. This event was followed by the rapid development of the maritime power of the city and the establishment of her empire over the islands of the Ægean Sea. Her increasing wealth afforded her ample means for the embellishment of the city, and during the half century which elapsed between the battle of Salamis and the commencement of the Peloponnesian war, the Athenians erected those masterpieces of architecture which have been the wonder of succeeding ages. The city was captured by the Lacedæmonians in 404 B.C., and was conquered by Sulla, the Roman general, 86 B.C., after which it dwindled into insignificance as a maritime city. Its prosperity continued, however, under the Roman sway, and it continued to be famous as the centre of philosophy, literature, and art, many famous buildings having been erected there by foreign rulers after the decline of its power. During the Middle Ages it sunk into insignificance. It has successively belonged to the Goths, Byzantines, Bergundians, Franks, Catalans, Florentines, Venetians, and Turks. In 1687 the buildings of the Acropolis suffered severe injury in the siege of Athens by the Venetians under Morosini. In 1834 Athens was declared the capital of the kingdom of Greece.

Athlone. A town in Roscommon, Ireland, which was burnt during the civil war in 1641. After the battle of the Boyne, Col. R. Grace held Athlone for James II. against a besieging army, but fell when it was taken by assault by Ginkel, June 30, 1691. See **AUGHHRIM.**

Atilt. In the manner of a tilter; in the position or with the action of a man making a thrust. "To run a tilt at men."

Atlanta. A city of Fulton Co., Ga., and the capital of the State. In its vicinity a battle was fought between the Federal forces under Gen. Sherman and the Confederates under Gen. Hood, July 22, 1864. The city was taken by Gen. Sherman on September 2, and held by him until November 15, when he set out on his famous "march to the sea."

Atmidometer, or Admometer. An instrument for measuring the rate of evaporation, used in English medical corps.

Atrebatas. A Belgic people subdued by Cæsar, 57 B.C.

Attach. To place, to appoint. Officers and non-commissioned officers are said to be attached to the respective army, regiment, battalion, troop, or company with which they are appointed to act.

Attache (*Fr.*). The seal and signature of the colonel-general in the old French service, which were affixed to commissions of officers after they had been duly examined.

Attack. Any general assault or onset that is given to gain a post or break a body

of troops. *False attack*, a feigned or secondary movement in the arrangements of an assault, intended to divert the attention of an enemy from the real or principal attack. Such a movement has been sometimes converted into a real attack, and succeeded when the main assault, to which it was intended to be subsidiary, had failed. *Attack of a siege* is a furious attack made by the besiegers by means of trenches, galleries, saps, breaches, or mines, etc., by storming any part of the front attack. *To attack in front or flank*, in fortifications, means to attack the salient angle, or both sides of the bastion.

Attack and Defense. A part of the sword exercise drill.

Attacking. The act of making a general assault or onset for the capture of a post, fort, etc., or the breaking of a body of troops. Previous to an assault on a fortified position, the artillery ought to support the other troops by a combined fire of guns, howitzers, and small mortars, so that, if possible, the fire may be simultaneous, as such diversity of projectiles would tend to distract the defenders, and prevent them from extinguishing any fires among buildings, besides throwing them into confusion at the moment of assault. In cases of surprise, when immediate action is required, this method cannot, of course, be practicable.

Attention. A cautionary command addressed to troops preparatory to a particular exercise or manoeuvre. *Gare-a-vous* has the same signification in the French service.

Attestation. In the English service, is a certificate which is granted by a justice of the peace within four days after the enlistment of a recruit. This certificate bears testimony that the recruit has been brought before the justice in conformity to the Mutiny Act, and has declared his assent or dissent to such enlistment, and that (if according to the said act he shall have been duly enlisted) the proper oaths have been administered to him by the magistrate, and the sections of the articles of war against mutiny and desertion read to the said recruit.

Audenarde. See OUDENARDE.

Auditor, Second. An official connected with the Treasury Department, whose duties consist in examining all accounts relating to the pay and clothing of the army, the subsistence of officers, bounties, premiums, military and hospital stores, and the contingent expenses of the War Department, etc., and transmitting them with vouchers, etc., to the Second Comptroller for his decision.

Auditor, Third. To him is assigned the duty of examining all accounts relative to the subsistence of the army, the quartermaster's department, and generally all accounts of the War Department other than those provided for; also all accounts relating to pensions, claims for compensation for loss of horses and equipments of officers and enlisted men in the military service of the United States, etc.

Auditor, Fourth. Examines all accounts

accruing in the Navy Department, or relative thereto, and all accounts relating to navy pensions.

Auerstadt (Prussia). Here and at Jena, on October 4, 1806, the French signally defeated the Prussians. See JENA.

Auget. A kind of small trough used in mining, in which the saucisson or train-hose is laid in straw, to prevent the powder from contracting any dampness.

Aughrim. Near Athlone, in Ireland, where, on July 12, 1691, a battle was fought between the Irish, headed by the French general St. Ruth, and the English, under Gen. Ginkel. The former were defeated and lost 7000 men; the latter lost only 600 killed and 960 wounded. St. Ruth was slain. This engagement proved decisively fatal to the interests of James II., and Ginkel was created earl of Athlone.

Augusta. A city and capital of Richmond Co., Ga., on the Savannah River. It was an important place at the time of the Revolution, and was captured by the English and Tories in 1779, but surrendered to Col. Henry Lee, of the Revolutionary army, June 5, 1781.

Augusta, or Agosta. A well-built and fortified city in the intendency of Catania, in Sicily; near here, on April 21, 1676, a naval battle was fought between the French under Duquesne, and the Dutch and Spanish fleet under Ruyter, the advantage remaining with the French. Ruyter was wounded at this battle, and died a few days after at Syracuse.

Augusticum. A bounty that was given by the Roman emperors to their soldiers upon the latter taking the oath of allegiance for the first time, or upon a renewal of the oath.

Aulic Council. A term applied to a council of the War Department of the Austrian empire, and the members of different provincial chanceries of that empire are called aulic councillors.

Aumacor. A title similar to general-in-chief, which was given to the chief of the Saracens during the Crusades.

Ausen. A name given by the Goths to their victorious generals. This word in their language signifies "more than mortal," i.e., demi-gods.

Aussig. A village in Prussia, where, in 1426, the army of the margrave Frederick von Meissen was defeated by the Hussites and Poles under Jakubko von Wrezewo-ecze and Prince Sigismund Koribut. The city was plundered and burned the same night by the Hussites.

Austerlitz (Moravia). Here a battle was fought between the French and the allied Austrian and Russian armies, December 2, 1805. Three emperors commanded: Alexander of Russia, Francis of Austria, and Napoleon of France. The killed and wounded exceeded 80,000 on the side of the allies, who lost 40 standards, 150 pieces of cannon, and thousands of prisoners; the French loss

amounted to about 12,000 men. The decisive victory of the French led to the treaty of Presburg, signed December 26, 1805.

Austria, Empire of (Ger. *Oesterreich*, "eastern kingdom"). One of the most extensive and most populous of European kingdoms, comprising the southeast part of Central Europe and more than half the territory of the Danube. It is composed of a union of different states, some of them at one time forming independent kingdoms, inhabited by races of people differing from each other in descent, language, customs, laws, and religion, held together as one empire by being united under one sovereign and one central government. This territory, which was comprised in Noricum and part of Pannonia, was annexed to the Roman empire in 38, was overrun by Huns, Avars, etc., in the 5th and 6th centuries, and taken from them by Charlemagne, who united it to Germany as the "eastern kingdom," 791-96. In 1156 the country was made a hereditary duchy by the emperor Frederick I., and in 1458 was raised to an archduchy. Rodolph, count of Hapsburg, elected emperor of Germany in 1273, acquired Austria in 1278, and from 1493 to 1804 his descendants were emperors of Germany. On August 11, 1804, Francis II. became hereditary emperor of Austria. Vienna, the capital, was entered by a French army November 14, 1805, and evacuated January 12, 1806, Austria losing Venice and the Tyrol by the treaty of Presburg. Francis renounced the title of emperor of Germany August 6, 1806. Vienna was again taken by the French May 13, 1809, but was restored at the peace, October 14 following. In 1848 Lombardy revolted, and Milan and other disaffected towns formed an alliance with Charles Albert, king of Sardinia, who then invaded the Austrian territory at the head of a large army, victory seeming for a time to favor the Italians. In the following year, however, both the insurgents and their Sardinian ally were repeatedly defeated by the Austrian forces under Marshal Radetzky, and Lombardy was again brought under the Austrian sway, but was ceded to Sardinia in 1859. Prussia and Italy declared war against Austria in 1866; but, through the intervention of Napoleon, peace was concluded the same year, Austria losing Venice and the Quadrilateral.

Authority. In a general acceptance of the term, signifies a right to command and a consequent right to be obeyed. For the appointment of officers of the U. S. army, see **APPOINTING POWER**. It appears that the sovereigns of Great Britain and other nations have the power to appoint and dismiss officers at pleasure.

Autocrat. A person vested with an absolute independent power, by which he is rendered unaccountable to any other for his actions. The power of the Athenian generals or commanders was usually limited, so

that, at the expiration of their office, they were liable to render an account of their administration. But, on some extraordinary occasions, they were exempted from this restraint, and sent with a full and uncontrollable authority; in which sense they were styled autocrats. Somewhat similar was the Roman *dictator*. This term is sometimes applied to the czar of Russia.

Automatic Fire. A mixture of combustibles used by the Greeks. It was exploded by the rays of the sun.

Autonomy. The power or right of self-government. This was a privilege jealously preserved in all the important cities of ancient Greece, nearly every one of which was an independent state. The right to make their own laws and elect their own magistrates was also granted by the Romans to some of their cities, and was regarded as a mark of honor.

Autun (anc. *Bibracte*, *Augustodunum*). A town in France, department of the Saône-et-Loire. Here, in the year 21, two Roman legions under Silius gained a victory over Sacrovir, chief of the *Ædui*, who had assembled a considerable force to oppose Silius. The Germans besieged it in 355; captured by the Burgundians in 414; devastated by the Saracens in 781; burned by the Normans in 888 and 895. This city was besieged without success by Marshal d'Aumont in 1591. It was also the scene of hostile operations between Garibaldi and the Germans in the winter of 1870-71.

Auxerre. Chief town of the department of Yonne, France. It is supposed to be on the site of the ancient *Autissiodorum*, which was a flourishing town before the Roman invasion of Gaul. It successfully resisted the Huns under Attila, was taken from the Romans by Clovis, and after his death became a part of the kingdom of Burgundy. The English took it in 1359, but it was retaken by Du Guesclin. It was finally united to the kingdom of France by Louis XI. John, "Sans Peur," duke of Burgundy (reigned from 1404-19), caused the assassination of Louis, duke of Orleans, in 1407, which gave rise to a civil war between the Burgundians and the dukes of Orleans and their allies, which was ended by the treaty of Auxerre, August 10, 1412.

Auxiliary. Foreign or subsidiary troops which are furnished to a belligerent power in consequence of a treaty of alliance, or for pecuniary considerations. Of the latter description may be considered the Hessians that were employed by Great Britain to enslave America.

Auxiliary War. See **WAR, AUXILIARY**.

Auximum (now *Osimo*). A town in Italy, 9 miles from Ancona, which Belisarius (a great general of the Byzantine empire) captured from the Goths in 539.

Avallon (anc. *Aballo*). A town in the department of Yonne, France, which sustained a long siege and was dismantled during the reign of King Robert in the 10th

century. It was sacked by the Saracens in 731, and by the Normans in 848; taken by Charles VII. in 1433, retaken by Philip the Good, duke of Burgundy, in 1455, and pillaged by the troops of the League in 1598.

Avant (*Fr.*). Foremost, most advanced towards the enemy; as, *Avant-chemin couvert*, the advanced covered way which is made at the foot of the glacis to oppose the approaches of an enemy. *Avant-duc*, the pile-work which is formed by a number of young trees on the edge or entrance of a river. They are driven into the ground with battering-rams or strong pieces of iron, to form a level floor by means of strong planks being nailed upon it, which serve for the foundation of a bridge. Boats are placed wherever the *avant-duc* terminates. The *avant-duc* is had recourse to when the river is so broad that there are not boats sufficient to make a bridge across. *Avant-ducs* are made on each side of the river. *Avant-fosse*, the ditch of the counterscarp next to the country. It is dug at the foot of the glacis. *Avant-garde*, advance-guard. *Avant-trains*, the limbers of field-pieces on which are placed boxes containing ammunition enough for immediate service.

Avars. Barbarians who ravaged Pannonia and annoyed the Eastern empire in the 6th and 7th centuries; subdued by Charlemagne about 799, after an eight years' war.

Avein, or Avaine. A village in Luxembourg, where, on May 20, 1685, the French and Dutch, under Marshals de Chatillon and de Brere, defeated the Spaniards under Prince Thomas of Savoy. The prince lost 4000 men killed and wounded, 900 prisoners, and 14 pieces of cannon.

Aventaille. The movable part of a helmet.

Averysborough. A village of North Carolina, on Cape Fear River, about 40 miles south of Raleigh. During Gen. Sherman's South Carolina campaign, in 1865, this place was the scene of an engagement between his forces and about 20,000 Confederates under Gen. Hardee, who were intrenched in a swampy neck between Cape Fear and South Rivers in order to check Sherman's progress, and gain time for the concentration of Gen. Johnston's forces in the rear at Raleigh, Smithfield, or Goldsboro'. The position of the Confederates was a strong one to carry by reason of the nature of the ground, which was very soft; but after four hours' fighting they were driven back to a second line better and more strongly held, losing 8 guns and 217 prisoners. Here the fighting was continued until late in the afternoon, when the entire Federal line advanced and drove the Confederates within their intrenchments, pressing them so hard that during the night of March 16, which was stormy, they retreated towards Smithfield. The Union loss was 12 officers and 65 men killed and 477 wounded.

Avesnes. A city in the department of

the North, France; captured by Louis XI.; recaptured by the Spaniards in 1559; returned to France in 1659; occupied by the Russians in 1814, and by the Prussians in 1815.

Avesnes le Sec, Battle of. The French were defeated by the Austrians in this battle, September, 1793.

Avigliana. A city in Italy where the French defeated the Piedmontese in 1680.

Avignon. A city in Southeastern France; besieged and captured by Louis VIII. of France in 1226; ceded by Philip III. to the pope in 1273. The papal seat was removed by Clement V. to Avignon in 1309. In 1343, Clement VI. purchased the sovereignty from Jane, countess of Provence and queen of Naples. In 1408 the French, wearied of the schism, expelled Benedict XIII., and Avignon ceased to be the seat of papacy. Here were held nine councils (1080-1457). This city was seized and restored several times by the French kings; the last time in 1773. It was claimed by the National Assembly, 1791, and was confirmed to France by the congress of sovereigns in 1816. In October, 1791, horrible massacres took place here.

Avis, or Aviz. An order of knighthood in Portugal, instituted by Sancho, the first king of Portugal, in imitation of the order of Calatrava, and having, like it, for its object the subjugation of the Moors. The king of Portugal is grand-master of the order.

Avranches (anc. *Abrancæ*). A city in the department of La Manche, France. It was a place of importance during the Roman period. Charlemagne fortified it, but it was taken by the Normans in 865. It was captured by Geoffrey Plantagenet in 1141; by Guy de Thouars in 1208; by the English in 1418; by the Calvinists in 1562; besieged by the royal troops in 1591.

Award. A judgment, the result of arbitration. In a military sense, the decision or sentence of a court-martial. To award medals of honor.

Awkward Squad. See **SQUAD**.

Axel. A town in the province of Zealand, Holland; captured by escalade from the Spaniards August 20, 1586, by Prince Maurice of Saxony, who was then but twenty years of age; captured by assault on May 16, 1747, by Marshal Maurice de Saxe.

Axis. A straight line, real or imaginary, about which a body revolves is called the axis of rotation. In gunnery, the axis of the piece is the central line of the bore of the gun.

Axum, or Axoum. A town in Abyssinia, said to have been the capital of a kingdom whose people were converted to Christianity by Frumentius, in the 4th century, and to have been the allies of Justinian, 533; captured and burned by the Arabs in 1532.

Aya-Bassi, or Bachi. A non-commissioned grade in the corps of janissaries, corresponding to that of corporal in modern armies.

Ayacucho. A city in Peru; here the Pe-

ruvians finally gained their independence by defeating the Spaniards, December 9, 1824. The Spaniards lost 6 generals killed, and General Lascerna wounded and taken prisoner; 700 men under Canterac and Valdez, who tried to escape, were forced to surrender.

Aylesbury. A town in Buckinghamshire, England; was reduced by the West Saxons in 571. St. O'Syth, beheaded by the pagans in Essex, was buried there, 600. William the Conqueror invested his favorites with some of its lands, under the tenure of providing straw for his bed-chambers, three eels for his use in winter, and in summer, straw, rushes, and two green geese, thrice every year.

Aylesford. A town in Kent, England; here, it is said, the Britons were victorious over the Saxon invaders, 455, and Horsa was killed.

Azaine (Fr.). A name formerly applied to a trumpet in the French army.

Azapes. Auxiliary troops which were levied by the Turks among the Christians (under their dominion), whom they exposed to the first attack of the enemy.

Azay-le-Rideau. A small town in the department of Indre-et-Loire, France, formerly fortified; it sustained several sieges during the reign of Charles VI.

Azaz. A fortress which was situated between Aleppo and Antioch; captured by the Saracens in 688 B.C.

Azmoos. A village in Switzerland, where the French under Massena defeated the Austrians and took 3000 prisoners.

Azoe, or Azov. A town in Russia in Europe, captured by Tamerlane in 1392, by the Turks in 1471, by the Russians in 1696; returned to the Turks in 1711; ceded to Russia in 1774. It was bombarded and destroyed by an allied English and French squadron in 1855.

Azof, Sea of. The *Palus Mæotis* of the ancients, communicates by the Strait of Yenikale, or Kertch (the Bosphorus Cimmerius), with the Black Sea, and is entirely surrounded by Russian territory. An expedition composed of British, French, and Turkish troops, commanded by Sir G. Brown, arrived at Kertch, May 24, 1856, when the Russians retired, after blowing up the fortifications. On the 27th the allies marched upon Yenikale, which also offered no resistance. On the same evening the allied fleet entered the sea of Azof, and in a few days completed their occupation of it, after capturing a large number of merchant vessels, etc. Immense quantities of stores were destroyed by the Russians to prevent them falling into the hands of the allies.

Azotus. See **ASHDOD**.

Aztecs. The ruling tribe in Mexico at the time of the Spanish invasion, 1519.

Azure. A French word used in heraldry to signify blue. In engraving arms it is always represented by horizontal lines.

B.

Baalbec. An ancient city of Syria. From the accounts of Oriental writers, it was a place of importance down to the time of the Moslem invasion of Syria. After the capture of Damascus, it was regularly invested by the Moslems, and after a courageous defense at length capitulated; sacked and dismantled by the caliph of Damascus, and the principal inhabitants put to the sword, 748; pillaged by Timour Bey, 1400; afterwards subjected to Turkish supremacy; pillaged August 8, 1860, and the Christian inhabitants massacred by the Mohammedans.

Bab-el-Thaza. A place in Algeria where the French fought the Arabs, April 22, 1842.

Babylon. One of the oldest and most celebrated cities in the world, the ancient capital of the Babylonio-Chaldean empire, was situated in an extensive plain on the Euphrates, about 60 miles south of Bagdad. The modern town of Hillah is supposed to occupy a portion of its site. About 588 B.C., Nebuchadnezzar, king of Babylon, captured

Jerusalem, burned the great temple of Solomon, and carried away the Jews as captives to Babylon. Cyrus besieged Babylon, took it by stratagem in 538, and put to death the king Belshazzar, after which the kingdom of Babylon ceased to exist. The city was occupied by Darius in 518, and taken by Alexander the Great in 331. Alexander having selected it as the capital of his empire, died there in 323 B.C.

Bacchi. Two ancient warlike machines; the one resembled a battering-ram, the other cast out fire.

Bachelier (Fr.). A young squire, or knight, who has passed through his first campaign, and received the belt of the order.

Bachevaleureux. A term which, in the old French language, signified warrior, brave, valiant, etc.

Backing. The heavy plating of wood, or of wood and iron, used to support and strengthen iron plates.

Back-plate. A piece of armor for covering the back.

Back-sight. See **SIGHT, REAR.**

Back-step. The retrograde movement of a man, or a body of men, without changing front.

Backsword. A sword with one sharp edge. In England, a stick with a basket handle, used in rustic amusements; the game in which it is used; called also "single stick."

Backwards. A technical word made use of in the British service to express the retrograde movement of troops from line into column, and *vice versa*. Also a word of command in the U. S. service, to cause a man, or body of men, to march to the rear without changing front.

Bactria (now *Bokhara*). A province of the Persian empire; it was inhabited by a rude and warlike people, who were subdued by Cyrus or his next successors. It was included in the conquests of Alexander, and formed a part of the kingdom of the Selucidae until 255 B.C., when Theodotus, its governor, revolted from Antiochus II., and founded the Greek kingdom of Bactria; overthrown by the Parthians 134 or 125 B.C.

Bacule. A kind of portcullis or gate, made like a pitfall, with a counterpoise. See **BASCULE BRIDGE.**

Badajos (Southwest Spain). An important barrier fortress, surrendered to the French, under Soult, March 11, 1811; was invested by the British, under Lord Wellington, on March 16, 1812, and stormed and taken on April 6, 1812. The French retreated in haste.

Badaleers. Musket-charges of powder in tin or copper tubes, worn dangling from a shoulder-belt, before the introduction of cartridges.

Baddesdown Hill, or Mount Badon. Near Bath, England, where Bede says the Britons defeated the Saxons, 493; others say in 511 or 520.

Badelaire, or Bandelaire (*Fr.*). A short, broad, curved, and double-edged pointed sword.

Baden (Southwest Germany). A grand duchy; broke out in insurrection and joined by the free city of Rastadt, May, 1849; the Prussians entered it, and defeated the insurgents commanded by Mierolawski, June 15, 1849. Noted as the place where the Emperor Napoleon III., the prince regent of Prussia, and the German kings and princes held an interview, June 16, 1860.

Badge. A distinctive mark, token, or sign, worn on the person. *Corps* badges were worn to distinguish the army corps during the civil war, 1861-65. *Marksmen's badges* are given to good shots in most armies.

Badon, Mount. The scene of a battle said to have been fought by King Arthur against the Saxons who invaded his kingdom, and in which the latter were signally defeated. By some writers Badon has been identified with Bath, by others in Berkshire.

Bæcula. An ancient town in Hispania

Tarraconensis, west of Castulo, where the Romans under Scipio defeated the Carthaginians under Hasdrubal, 209 B.C.

Bagaudes. A name given to the peasants of Gaul, who revolted against the Romans in 270; they pillaged cities and villages and massacred the Roman officers; two of the insurgent chiefs, Aliandus and Amandus, were elected emperors; their reign was of short duration; besieged in their camp near the confluence of the Seine and Marne, where Saint-Maur is now situated, they died in arms. This place was named for a long time "Camp des Bagaudes."

Bagdad. In Asiatic Turkey, built by Al Mansour, and made the seat of the Saracen empire about 762; taken by the Tartars, and a period put to the Saracen rule, 1258; often taken by the Persians, and retaken by the Turks, with great slaughter; the latter took it in 1638, and have held it since.

Baggage. The clothes, tents, utensils of divers sorts, and provisions, etc., belonging to an army, or part of an army.

Baggonet. The old term for bayonet.

Bagpipe. The name of a musical warlike instrument, of the wind kind, used by the Scotch regiments, and sometimes by the Irish. Bagpipes were used by the Danes, by the Romans, and by the Asiatics. The Greeks also had an instrument composed of a pipe and blown-up skin. The bagpipe has been a favorite instrument among the Scots. There are two varieties, the one with long pipes, sounded with the mouth; the other, with short pipes, filled with air by a bellows, and played on with the fingers. The first, the loudest and most ear-piercing of all music, is the genuine Highland pipe, and was suited to the warlike genius of that people. It formerly roused their courage to battle, alarmed them when secure, and collected them when scattered, solaced them in their long and painful marches, and in time of peace kept up the memory of the gallantry of their ancestors by the tunes composed after signal victories. The other is the Irish bagpipe.

Bags. Articles used in field fortifications, and in works to cover a besieging army. *Sand-bags*, which are generally 16 inches in diameter, and 30 high, are filled with earth or sand, to repair breaches and embrasures of batteries, when damaged by the enemy's fire or by the blast of the guns. They are also placed on parapets, so arranged as to form a covering for men to fire through. *Earth-bags* contain about a cubical foot of earth, and are used to raise a parapet in haste, or to repair one that is beaten down. They are only employed where the ground is rocky, or too hard for the pickaxe and spade, and does not afford ready material for a temporary parapet.

Bags, Cartridge-. See **CARTRIDGE.**

Bags of Powder. Are used to blow down gates, stockades, and slight obstructions. In future wars the higher explosives will probably be used for such purposes.

Bahama Isles (North America). Were the first points of discovery by Columbus. New Providence was settled by the English in 1629. They were expelled by the Spaniards in 1641; returned in 1666; again expelled in 1703. These isles were formally ceded to the English in 1783. The Bahamas profited by blockade-running during the American civil war, 1861-65.

Bahar. A province in Northern India; conquered by Baber in 1530. Bahar, Bengal, and Orissa, a princely dominion, became subject to the English East India Company in 1765, by the treaty of Allahabad.

Baicalklar. A color-bearer in the Turkish army.

Baiky. The ballium, or inclosed plat of ground in an ancient fort.

Bail. A stout iron yoke placed over heavy guns and fitting closely over the ends of the trunnions, to which it is attached by pins in the axis of the trunnions; used to raise or lower the gun by means of the gin.

Baille (*Fr.*). A term formerly used to designate a work or fortification which served as an outpost or exterior defense.

Baionnier (*Fr.*). A name formerly given to soldiers who were armed with a bayonet.

Baker, Post. The person who bakes bread for a garrison. In the U. S. service an enlisted man, who receives additional pay for his labor.

Bakery, or Bakehouse. See OVENS.

Balaklava. A small town in the Crimea, with a fine harbor, about 10 miles from Sebastopol. Near here about 12,000 Russians, commanded by Gen. Liprandi, were repulsed by a furious charge of heavy English cavalry, led by Brig.-Gen. Scarlett, under the orders of Lord Lucan, October 25, 1854. After this, from an unfortunate misconception of Lord Raglan's order, Lord Lucan ordered Lord Cardigan, with the light cavalry, to charge the Russian army, which had reformed on its own ground, with its artillery in front. This order was most gallantly obeyed, and great havoc was made on the Russians; but of 670 British horsemen only 198 returned (termed by Tennyson "The Charge of the Six Hundred"). On March 22, 1855, a sortie from the garrison of Sebastopol led to a desperate engagement here, in which the Russians were vigorously repulsed, with the loss of 2000 men killed and wounded; the allies lost about 600.

Balance-step. An exercise in squad drill, a preliminary to marching.

Balbec. See BAALBEC.

Baldrick, or Baudrick. A girdle, or richly ornamented belt, worn pendent from one shoulder across the breast, and under the opposite arm.

Bale, or Basel. One of the largest towns in Switzerland; captured and burned by the Hungarians in 917. In 1444 there was a bloody battle fought about a quarter of a mile beyond its gates, called the battle of St. Jacob, between the Swiss, 1600 strong, and a French army that was twenty times

their number, commanded by the dauphin, afterwards Louis XII. For ten hours the brave Swiss band kept this large army in check; but nearly all the Swiss fell, not more than 10, according to some accounts, escaping alive. This exploit first spread the fame of Swiss valor, and led to the enrollment of the Swiss body-guard of France. The treaties of peace between France and Spain, and France and Prussia, were signed here, July 22, 1795.

Balearic Islands. A group of islands in the Mediterranean; conquered by the Romans 123 B.C.; by the Vandals about 426 B.C., and formed part of Charlemagne's empire, 799. They were conquered by the Moors about 1006, and held by them till about 1280, when they were annexed by Aragon. See MAJORCA and MINORCA.

Balista. A machine in ancient warfare used for throwing stones, burning objects, leaden balls, and even dead and putrefied bodies. The latter were thrown to cause sickness in besieged cities.

Balistrarium. A store-room or arsenal in which the Romans stored their balistas.

Balister. A term applied in ancient times to a cross-bow.

Balistrer. A name applied to cross-bow men in ancient times.

Balkan. The ancient Hæmus, a range of mountains extending from the Adriatic to the Euxine. Their passage, up to that time deemed impracticable, was completed by the Russians under Diebitsch during the Russian and Turkish war, July 26, 1829. An armistice was the consequence, and a treaty of peace was signed at Adrianople, September 14, following. The Balkan was again crossed by the victorious Russians in the face of all opposition during the Russian and Turkish war, 1877.

Balks. Joist-shaped spars, which rest between the cleats upon the saddles of two pontoons, to support the chess or flooring.

Ball. Is a general term applied to every kind of spherical shot fired from a musket, rifle, or cannon. Leaden balls are chiefly used for the small-arms and iron for the artillery. See CARTRIDGE, SHOT, SHELLS.

Ball and Chain. For serious offenses soldiers are sometimes sentenced to wear a 6- or 12-pounder ball attached by a chain to the leg.

Ball-cartridge. A cartridge containing a ball.

Ballinamuck. A town in the county of Longford, Ireland. Here, on September 8, 1798, the Irish rebels and their French auxiliaries were defeated and captured.

Ballistea. In antiquity, songs accompanied by dancing, used on occasions of victory.

Ballistic, or Electro-ballistic Machine. Is a machine designed to determine by electricity the initial velocity of a projectile. The West Point ballistic machine, devised for use at the Military Academy by Col. Benton, of the ordnance department, and

since adopted by that department, consists of a bed-plate of metal supporting an arc placed in a perpendicular position, and graduated. Suspended perpendicular to the plane of this arc are two pendulums, having a common axis of motion passing through the centre. Two electro-magnets are attached to the horizontal limb of the arc to hold up the pendulums when they are deflected through angles of 90°. There is also an apparatus which records the point at which the pendulums pass each other, when they fall by the breaking of the currents which excite the magnets, two targets being placed so as to support the wires in a position to be cut by the projectile. The velocity of the electric currents being considered instantaneous, and the loss of the power of the magnets simultaneous with the rupture of the currents, it follows that each pendulum begins to move at the instant that the projectile cuts the wire, and that the interval of time corresponds to the difference of the arcs described by the pendulums up to the time of meeting.

Ballistic Pendulum. A machine consisting of a massive block of wood suspended by a bar. It was devised for experiments on the initial velocities of cannon-shot. The shot being fired into the block, the velocity is calculated from the vibrating effect on the pendulum.

Ballistics. Is that branch of gunnery which treats of the motion of projectiles.

Ballistraria. Cruciform apertures in the walls of a stronghold, through which the cross-bow men discharged their bolts. It also signified a projecting turret, otherwise called a bartizan, such as is commonly seen in old castles.

Ballium. A term used in ancient military art, and probably a corruption of vallium. In towns, the appellation "ballium" was given to a work fenced with palisades, and sometimes to masonry covering the suburbs; but in castles, it was the space immediately within the outer wall.

Ballon. A town in the department of the Sarthe, France, formerly fortified; captured by the English in 1417; retaken by Charles VII. of France.

Balloon. A bag or hollow vessel, made of silk or other light material, and filled with hydrogen gas or heated air, so as to rise and float in the atmosphere; called for distinction an *air-balloon*. Balloons were used extensively as a means of observation during the American civil war, 1861-65, and in the Franco-Prussian war of 1870.

Balloting. A bounding movement of a spherical projectile in the bore of a cannon. See **INJURIES TO CANNON**.

Ball-proof. Incapable of being penetrated by balls from fire-arms.

Ball's Bluff. In Virginia, on the banks of the Potomac. On October 21, 1861, by direction of the Federal general C. P. Stone, the heroic Col. Baker crossed the river to reconnoitre. He attacked the Confederate

camp at Leesburg, and was defeated with great loss. The disaster was attributed to mismanagement, and in February, 1862, Gen. Stone was arrested on suspicion of treason, but was afterwards discharged, and at a later period again given a command. The Federal loss in killed, wounded, and drowned was probably 1000 men.

Ballynahinch. A town in Ireland where a sanguinary engagement took place between a large body of the insurgent Irish and the British troops, under Gen. Nugent, June 13, 1798. A large part of the town was destroyed, and the royal army suffered very severely.

Balots (Fr.). Sacks or bales of wool, made use of in cases of great emergency, to form parapets or places of arms. They are likewise adapted for the defense of trenches, to cover the workmen in saps, and in all instances where promptitude is required.

Baltic Sea (Ger. *Ostsee*, or "Eastern Sea"). Separates Sweden and the Danish Isles from Russia, Prussia, and Germany. Declared neutral for commerce by treaty between Russia and Sweden, 1759, and Denmark, 1760. It is often partially frozen. Charles X. of Sweden with an army crossed the Belts in 1658. Several Baltic expeditions were undertaken by the British and French against Denmark and Russia.

Baltimore. The chief city in Maryland, situated at the head of navigation on the Patuxent River; it was founded in 1729. On September 12, 1814, the British army under Col. Ross advanced against this place. He was killed in a skirmish, and the command was assumed by Col. Brooke, who attacked and routed the American army, which lost 600 killed and wounded, and 800 prisoners. The projected attack on the town was, however, abandoned.

Baltimore (Ireland). A decayed town; early in the 17th century, the Algerine pirates plundered the town, carrying away 200 prisoners.

Baltinglass. A town in the county of Wicklow, Ireland. Here an action took place in 1798 between the royalists and the insurgents, in which the latter were defeated.

Bamberg. A town in Bavaria, said to have been founded by the Saxons in 804; taken and pillaged by the Prussians in 1759.

Bampton. A town in Devonshire, England. A great battle was fought here, 614, between the West Saxons and Britons, in which the former were defeated.

Ban (Fr.). A sort of proclamation made at the head of a body of troops, or in the several quarters or cantonments of an army, by sound of trumpet or beat of drum, either for observing martial discipline, or for declaring a new officer, or punishing a soldier, or the like. At present such kind of proclamations are given out in the written orders of the day.

Ban. In the former days of France, when

the feudal barons, who held their estates and honors from the king, were summoned to attend him in time of war, they were called the *ban*, or the levy first called out; while the tenants, subordinate to these barons, formed the *Arrière ban*, or secondary levy.

Banbury. A town in Oxfordshire, England. The castle erected by Alexander de Blois, 1125, has been frequently besieged; in 1646 it was taken by the Parliamentarians and demolished. At Edgecote, or Danesmore, near Banbury, Edward IV. defeated the Lancastrians under the Earl of Pembroke, July 26, 1469, and their leader and his brother were soon after taken prisoners and executed.

Bancal (Fr.). A curved sabre, which was used in France during the Republic and the Empire.

Band, Military. Consists of a body of musicians attached to each army regiment or battalion. The law provides for a band at the Military Academy at West Point, and for each artillery, cavalry, and infantry regiment. A chief musician, who shall be instructor of music, and for each artillery and infantry regiment two principal musicians; each cavalry regiment to have one chief trumpeter. Musicians for regimental bands are enlisted as soldiers, and formed under the direction of the adjutant, but are not permanently detached from their companies, and are instructed in all the duties of a soldier.

Banda Isles. Eastern Archipelago, visited by the Portuguese (1511), who settled on them 1521, but were expelled by the Dutch about 1600. Rohun Island was ceded to the English in 1616. The Bandas were taken by the latter in 1796; restored in 1801; retaken, 1811, and restored in 1816.

Banded-mail. A kind of armor, which consisted of alternate rows of leather or cotton and single chain-mail.

Banderet. In military history, implies the commander-in-chief of the troops of the canton of Berne, in Switzerland.

Banderol. A small flag used in marking out a camp, etc.; a camp color.

Bandes (Fr.). Bands, bodies of infantry. *Bandes Françaises*; the French infantry was anciently so called; the term, however, became less general, and was confined to the *Préôt des Bandes*, or the judge or provost-marshal that tried the men belonging to the French guards.

Banditti. Bands of robbers who infest the mountainous parts of Italy and Greece. Formerly they frequently attacked travelers, hurried them off into their mountain fastnesses, and held them captive until ransomed.

Bandoleer. In ancient military history, a large leathern belt worn over the right shoulder, and hanging under the left arm, to carry some kind of warlike weapons.

Bandoleer. A little wooden case covered with leather; every musketeer used to wear 12 of them hanging on a shoulder-belt; each

case contained the charge of powder for a musket. Bandoleers are now superseded by the cartridge-box.

Banffshire. A maritime county in the northeast of Scotland; it was the scene of many bloody conflicts between the Scots and their Danish invaders, and was the theatre of almost incessant struggles from 1624 to 1645.

Bangalore. A fortified town of Hindostan, in Mysore, which was taken from Tip-poo Saib by Lord Cornwallis in 1791.

Baniwas. A tribe of South American Indians living on the Amazon and the Rio Negro.

Banner. Originally a small square flag borne before a banneret, whose arms were embroidered on it; hence, a military ensign; the principal standard of a prince or state; a pennon; a streamer.

Bannered. Furnished with or bearing banners.

Banneret. Was originally a military rank conferred only on such as were able to bring a certain number of vassals into the field; hence, a rank corresponding to this; also, a small banner.

Bannockburn. In Stirlingshire, Scotland; the site of two battles: 1. Between Robert Bruce of Scotland and Edward II. of England, June 24, 1314. The army of Bruce consisted of 30,000; that of Edward of 100,000 men, of whom 52,000 were archers. The English crossed the rivulet to the attack, and Bruce having dug and covered pits, they fell into them and were thrown into confusion. The rout was complete; the English king narrowly escaped, and 50,000 were killed or taken prisoners. 2. At Sanchieburn, near here James II. was defeated and slain on June 11, 1488, by his rebellious nobles.

Banquette. Is the step of earth within the parapet, sufficiently high to enable the defenders, when standing upon it, to fire over the crest of the parapet with ease.

Banquette Slope. Is a slope of earth or timber, place in rear of the banquette when the top cannot be reached by an ordinary step.

Bantam. In Java; here a British factory was established by Capt. Lancaster in 1603. The English and Danes were driven from their factories by the Dutch in 1688. Bantam surrendered to the British in 1811, but was restored to the Dutch at the peace in 1814.

Bantry Bay. In the south of Ireland, where a French fleet bringing succor to the adherents of James II. attacked the English under Admiral Herbert, May 1, 1689. A French squadron of 7 sail of the line and 2 frigates, armed *en flute*, and 17 transports anchored here for a few days, but without effect, December, 1796. Mutiny of the Bantry Bay squadron took place in December, 1801.

Banyuls-de-Aspres. A town in the department of the Eastern Pyrenees, France,

which is memorable for the defense which its inhabitants made in 1798, when they compelled 7000 Spaniards, who had attacked them, to surrender.

Bapaume. A fortified town of France, department of Pas-de-Calais. A portion of the allied troops advanced to this place after compelling the French to abandon their fortified position, and to retreat behind the scarpe, in August, 1798.

Baptism of Blood. As the name implies, is the act of being baptized with blood, and was used especially with reference to soldiers who fought on their first battle-field. In the old French service, baptism of blood equalized all grades, and military services, not rank, were the recognized claims for promotion.

Baptism of Fire. A figurative term applied to soldiers who have passed through their first fire in battle.

Bar. A long piece of wood or iron. Bars have various denominations in the construction of artillery-carriages, as sweep- and cross-bars for tumbrils, fore, hind, and under cross-bars for powder-carts, shaft-bars for wagons, and dowel-bars, used in mortar-beds.

Bar. In heraldry, is one of those important figures or charges known as *ordinaries*. It is formed by two horizontal lines passing over the shield like the fess, but it differs from it in size,—the fess occupying a third, the bar only a fifth part of the shield. The fess is also confined to the centre, while the bar may be borne in several parts of the shield.

Barb. The reflected points of the head of an arrow. The armor for horses was so called.

Barbacan, or Barbican. In fortification, a watch-tower for the purpose of describing an enemy at a distance; advanced works of a place or citadel, properly the boulevards of the gates and walls; a fort at the entrance of a tower or bridge, with a double wall; or an aperture or loop-hole in the walls of a fortress through which to fire upon an enemy.

Barbary. A country in North Africa, considered to comprise Algeria, Morocco, Fez, Tunis, and Tripoli, with their dependencies (all of which see). Piratical states (nominally subject to Turkey) were founded on the coast by Barbarossa about 1518.

Barbets. Were peasants of Piedmont, who abandoned their dwellings when an enemy had taken possession of them. They formed into bodies and defended the Alps.

Barbette. An earthen terrace, raised within a parapet, so high as to enable guns to be fired over the latter, and therefore with a freer range than when worked at an embrasure.

Barbette Carriage. Is a carriage of the stationary class, on which a gun is mounted to fire over a parapet; and a barbette gun is any gun mounted on a barbette carriage.

Barbette Centre-pintle Carriage. See

ORDNANCE, CARRIAGES FOR, SEA-COAST CARRIAGES.

Barbette Front-pintle Carriage. See ORDNANCE, CARRIAGES FOR, SEA-COAST CARRIAGES.

Barbole (Fr.). A heavy battle-axe, used in ancient times.

Barboursville, or Cabell Court-house. The capital of Cabell Co., W. Va. It was the scene of a brilliant action between the Confederate and Federal forces, in which the latter were victorious, July 18, 1861.

Barce, or Berche (Fr.). A small gun, shorter and thicker than a falconet, which was formerly used on board ship.

Barcelona. An ancient maritime city in Northeastern Spain, said to have been rebuilt by Hamilcar Barca, father of the great Hannibal, about 238 B.C. The city has suffered much by war. The siege by the French, in 1694, was relieved by the approach of the English fleet commanded by Admiral Russell; but the city was taken by the Earl of Peterborough in 1706; bombarded and taken by the Duke of Berwick and the French in 1714; taken by Napoleon in 1808, and retained till 1814. It revolted against the queen in 1841, and was bombarded and taken in December, 1842, by Espartero.

Bard. A fortress and village of Piedmont on the bank of the Dora Baltea, 23 miles south-southeast of Aosta. The fortress is situated on an impregnable rock, and arrested for some time Napoleon's march in the valley of the Dora, at the outset of his campaign of 1800, almost compelling him to abandon it. The garrison consisted of 400 men, and was finally passed only by stratagem. It was subsequently razed by the French (1800), but has since been restored.

Bardewick. A town in Hanover, which was dismantled by Henry the Lion in 1189.

Bareilly. A province of Delhi, Northwest India, ceded to the East India Company by the ruler of Oude, 1801. A mutiny at Bareilly, the capital, was suppressed in April, 1816; on May 7, 1858, it was taken from the cruel Sepoy rebels.

Barezim. A small town in Poland, where the Russians were defeated by the Poles in 1676.

Barfleur. An ancient seaport town in the department of Manche, France, where William the Conqueror equipped the fleet by which he conquered England, 1066. Near it Prince William, duke of Normandy, son of Henry I., in his passage from Normandy, was shipwrecked November 25, 1120. Barfleur was destroyed by the English in the campaign in which they won the battle of Crécy, 1346. The French navy was destroyed near the cape by Admiral Russell after the victory of La Hogue in 1692.

Bari (Southern Italy). The *Barium* of Horace was in the 9th century a stronghold of the Saracens, and was captured by the emperor Louis II., a descendant of Charlemagne, in 871. In the 10th century it became subject to the Eastern empire, and

remained so till it was taken by Robert Guiscard, the Norman, about 1060.

Baril Ardent (*Fr.*). Fire-barrel; a barrel filled with layers of tarred chips intermixed with powder and primed at each end with a shell-fuze; it had holes bored in it for the purpose of admitting air to the burning contents; formerly used for illuminating purposes.

Baril Foudroyant, or *D'artifice* (*Fr.*). Of the same nature as the *baril ardent*, with the addition of grenades placed between the layers of chips. Barils foudroyants were used at the defense of a breech, by rolling them upon the assailants.

Barkam. A fortress on the banks of the Danube. Near here John Sobieski, king of Poland, was defeated by Pasha Ka-Mehemed, October 7, 1683.

Barking-irons. Large dueling pistols.

Barnacles. In heraldry, resemble what are now called twitchers, or instruments used by farriers to curb unruly horses. They are frequently introduced into coats of arms as a charge.

Barnet. A town in Hertfordshire, England. Here, at Gladsmore Heath, Edward IV. gained a decisive victory over the Lancastrians on Easter-day, April 14, 1471, when the Earl of Warwick and his brother, the Marquis of Montacute, or Montague, and 10,000 men were slain.

Barometer. An instrument for measuring the weight of the atmosphere. The form ordinarily used was invented in 1643, by Torricelli. It consists of a glass tube filled with mercury inverted in an open cup.

Baron. In England a title of nobility,—the grade between the baronet and viscount,—the lowest grade in the House of Lords.

Barons' War. Arose in consequence of the faithlessness of King Henry III. and the oppression of his favorites in 1258. The barons, headed by Simon de Montfort, earl of Leicester, and Gilbert de Clare, earl of Gloucester, met at Oxford in 1262, and enacted statutes to which the king objected. In 1263 their disputes were in vain referred to the decision of Louis IX., king of France.

War broke out, and on May 14, 1264, the king's party were totally defeated at Lewes, and De Montfort became the virtual ruler of the kingdom. Through treachery the war was renewed, and at the battle of Evesham, August 4, 1265, De Montfort was slain, and the barons were defeated. They, however, did not render their final submission till 1268.

Barrackpore. A native town and military cantonment on the river Hoogly, 16 miles from Calcutta, India. In 1857 it became famous as the cradle of the formidable mutiny or rebellion of that year. Several regiments of native troops were stationed at Barrackpore. The men objected to bite off the ends of the cartridges for the Enfield rifle, believing the paper to be polluted by animal fat. The troubles connected therewith—a mere prelude to the fatal outbreak at Meerut in May—commenced about the

beginning of February, and continued to assume various degrees of intensity, till at last two regiments of Bengal native infantry had to be disbanded. An intoxicated Sepoy of one of the disbanded regiments attacked and wounded his officer, Lieut. Baugh, with sword and pistol. This fellow, whose name was Mungul Pandey, would seem to have had the equivocal honor of giving the local designation of Pandies to the entire body of insurgents.

Barrack-allowance. In the British army, is a specific allowance of bread, beef, wood, coals, etc., for regiments stationed in barracks.

Barrack-guard. When a regiment is in barracks the principal guard is called the barrack-guard, the officer being responsible for the regularity of the men in barracks, and for all prisoners duly committed to his charge while on that duty.

Barrack-master. The officer who superintends the barracks of soldiers.

Barracks. Are permanent structures for the accommodation of soldiers, as distinguished from huts and tents, which have usually a square or open place in front, for the purpose of drill and parade.

Barrack-sergeants. In the British army, are faithful old sergeants who are selected from the line and placed in charge of barracks, under the superintendence of the barrack-masters.

Barrel. A round vessel or cask, of more length than breadth, and bulging in the middle, made of staves and headings and bound with hoops. Powder-barrels are made to contain 100 pounds each, the barrels being large enough to allow sufficient space for the powder to move when rolled, to prevent its caking. Also any hollow cylinder or tube, as the barrel of a gun. See FIRE-BARREL.

Barricade. An obstruction formed in streets, avenues, etc., so as to block up access to an enemy. They are generally formed of overturned wagons, carriages, large stones, breastworks, abatis, or other obstacles at hand.

Barrier. In a general sense means any fortification or strong place on the frontiers of a country. It is likewise a kind of fence composed of stakes and transoms, as overthwart rafters, erected to defend the entrance of a passage, retrenchment, or the like. In the middle of the barrier is a movable bar of wood, which is opened or shut at pleasure. It also implies a gate made of wooden bars, about 5 feet long, perpendicular to the horizon, and kept together by two long bars going across and another crossing diagonally. Barriers are used to stop the cut made through the esplanade before the gate of a town.

Barrier Treaty. A treaty by which the Low Countries were ceded to the emperor Charles VI., and which was signed by the British, Imperial, and Dutch ministers November 15, 1715.

Barritus, or *Bardites*. A word which

not only signified the battle-cry of the ancient Germans, but all battle-cries were formerly so called.

Barrosa, or Barosa. In Southern Spain, where a battle was fought on March 5, 1811, between the British army, commanded by Maj.-Gen. Sir Thomas Graham, afterwards Lord Lynedoch, and the French under Marshal Victor. After a long conflict, the British achieved one of the most glorious triumphs of the Peninsular war. Although they fought at great disadvantage the British compelled the French to retreat, leaving nearly 8000 dead, 6 pieces of cannon, and an eagle, the first that the British had taken. The loss of the British was 1169 men killed and wounded.

Bar-shot. An obsolete projectile, consisting of two shot connected by a bar of iron.

Bar-sur-Aube. An ancient town of France, on the Aube, in the department of Aube, where the French under Oudinot and MacDonald were defeated by the allies, February 27, 1814.

Bar-sur-Seine. A town in the department of Aube, France; often ruined and sacked during the wars of Burgundy. It was the scene of a severe engagement between Napoleon and the allies, May 25, 1814.

Bartholomew, St. The massacre of St. Bartholomew commenced at Paris on the night of the festival of this saint. According to Sully 70,000 Huguenots, or French Protestants, including women and children, were murdered throughout the kingdom by secret orders from Charles IX., at the instigation of his mother, the queen-dowager, Catherine de Médicis, August 24, 1572.

Bartholomew, St. A West India island held by Sweden. It was colonized by the French in 1648; and has been several times taken and restored by the British. It was ceded to Sweden by France in 1785.

Bartizan. A small stone closet thrown out upon corbels over doorways and on other parts of mediæval castles, generally for defensive purposes, but sometimes for the convenience of the inmates.

Bascinet. A light helmet, generally without a visor; so called from its resemblance to a basin.

Baschi. A Turkish title, signifying a superior commander, officer, chief, etc.; this title is only used in connection with the office title; the most prominent are:

TOPTSCHJY-BASCHI, general of artillery and inspector of forts, etc.

SOLACKI-BASCHI, sub-commander of the archers.

SANDSCHJACK-DARLAHS-BASCHI, chief of the 50 color-bearers.

KONADSCHJY-BASCHI, quartermaster-general.

BOLUCK-BASCHI, colonel of a regiment (Boluck) of 1000 militia.

ODA-BASCHIS, company officers who superintend drill.

Bascule Bridge. A kind of draw-bridge with a counterpoise swinging up and down, and usually a pit behind it, in which the counterpoise falls or rises as the bridge rises or falls. Bascule is the arrangement of the counterpoise in bascule bridges.

Base. In fortifications, is the exterior side of the polygon, or that imaginary line which connects the salient angle of two adjacent bastions.

Base. In heraldry, denotes the lower part of the shield.

Base-line. In gunnery, is a line traced around the gun in rear of the vent; also the measured line used to obtain ranges by triangulation.

Base of Operations. That secure line of frontier or fortresses, or strong country occupied by troops, or of sea occupied by fleets, from which forward movements are made, supplies furnished, and upon which a retreat may be made, if necessary.

Base of the Breech. In gunnery, is the rear surface of the breech of a gun.

Basel, Treaty of. This place gives its name to two important treaties of peace, concluded here on April 5 and July 22, 1795, between the representatives of the French Republic, Prussia, and Spain, by which Prussia withdrew from the coalition against France, took under her protection all the states of Northern Germany which should like herself relinquish the war in which the German empire was engaged, and also give up to the victorious republic her possessions beyond the Rhine; whilst Spain gave up her portion of St. Domingo, and prepared the way for that alliance with France which was afterwards productive of consequences so important.

Base-ring. In gunnery, is a projecting band of metal adjoining the base of the breech, and connected with the body of the gun by a concave moulding.

Bashaw. See PASHA.

Bashi-Bazouks. Are irregular troops in the pay of the sultan. Very few of them are Europeans; they are mostly Asiatics, from some of the pashalics in Asiatic Turkey; they are wild, turbulent men, ready to enter the sultan's service under some leader whom they can understand, and still more ready to plunder whenever an opportunity offers. During the Russo-Turkish war of 1854, etc., they had many encounters with the enemy in that kind of irregular warfare which the Russians intrust to Cossack horsemen; but the peaceful villagers had almost as much distrust of the Bashi-Bazouks as of the Russians. They were also partially employed by the British during the Crimean war.

Bashkirs. A race supposed to be descended from the Nogay Tartars, who inhabit the Russian provinces of Ufa and Yekaterinboorg, in the governments of Orenburg and Perm respectively. They are but partially civilized, and are generally employed by Russia as guards on the frontier of Asia.

Basientello (Southern Naples). Here the army of Otto II., in an ambushade, was nearly cut to pieces by the Greeks and Saracens, July 18, 982; the emperor barely escaped.

Basilisk. An ancient piece of ordnance, which was 10 feet long and weighed 7200 pounds; so called from its supposed resemblance to the serpent of that name, or from its size.

Basillard. An old term for a poniard.

Basket-hilt. The hilt of a sword, so made as to contain and guard the whole hand.

Basket-hilted. Having a hilt of basket-work.

Baskets. See GABION.

Baslard. A short sword or dagger, worn in the 15th century.

Basnet. See BASCINET.

Basque Provinces (Northwest Spain, Biscay, Guipuzcoa, and Alva). The Basques, considered to be descendants of the ancient Iberi, were termed Vascones by the Romans, whom they successfully resisted. They were subdued with great difficulty by the Goths about 580, and were united to Castile in the 13th and 14th centuries.

Basque Roads (Western France). Four French ships of the line, riding at anchor here, were attacked by Lords Gambier and Cochrane (the latter commanding the fire-ships), and all, with a great number of merchant and other vessels, were destroyed, April 11-12, 1809. Cochrane accused Gambier of neglecting to support him, and thereby allowing the French to escape. At a court-martial Lord Gambier was acquitted.

Bassée, La. A town in the department of the North, France, formerly fortified. It sustained several sieges. Louis XIV. captured it from the Spaniards and caused it to be dismantled.

Basseterre Roads, St. Christopher's, West Indies. Here the French admiral, the Comte de Grasse, was repulsed with loss in three desperate attacks on the British fleet, commanded by Sir Thomas Graves, January 25-26, 1782.

Basson (Northern Italy). Here the Austrians under Wurmser were defeated by the French under Massena, September 8, 1796.

Bassorah, Basrah, or Bussorah (Asia Minor). A Turkish city, founded by the Caliph Omar about 635. It has been several times taken and retaken by the Persians and Turks.

Bass Rock. An isle in the Frith of Forth, Southern Scotland; granted to the Landers in 1316; purchased for a state prison, 1671; taken by the Jacobites, 1690; surrendered, 1694; granted to the Dalrymples, 1706.

Bastard, or Batarde (Fr.). An ancient piece of ordnance of about 8 pounds calibre, 9½ feet long, and weighing 1950 pounds. It was invented by Jean Maurique de Lard, master-general of ordnance under Charles V. of France in 1585. He also had several

bastards cast of a larger calibre. This term was also applied to guns of an unusual make or proportion, whether longer or shorter.

Bastarnæ, or Basternæ. A warlike German people who migrated to the country near the mouth of the Danube. They are first mentioned in the wars of Philip and Perseus against the Romans, and at a later period they frequently devastated Thrace, and were engaged in wars with the Roman governors of the province of Macedonia. In 80 B.C. they were defeated by Marcus Crassus, and driven across the Danube, and we find them, at a later period, partly settled between the Tyras (now Dniester) and Borysthenes (now Dnieper), and partly at the mouth of the Danube, under the name of *Peucini*, from their inhabiting the island of Peuce, at the mouth of the river.

Bastia. A fortified seaport town, and formerly capital of Corsica, on its north-east coast, and 67 miles from Ajaccio; besieged without success by the Piedmontese in 1748; captured by the English, 1794.

Bastide (Fr.). In ancient times, a bastion, block-house, fortress, or outer fortifications.

Bastile. Originally, a temporary wooden tower used in warfare; hence, any tower or fortification.

Bastile, or Bastille (Paris). A castle built by Charles V., king of France, in 1369, for the defense of Paris against the English; completed in 1383, and afterwards used as a state prison. Henry IV. and his veteran army assailed it in vain in the siege of Paris during the war, 1587-94. On July 14-15, 1789, it was pulled down by the populace, the governor and other officers seized, conducted to the Place de Grève, their hands and heads were cut off, and the heads carried on pikes through the streets.

Bastinado. A punishment among the Turkish soldiers, which is performed by beating them with a cane or flat of a sword on the soles of their feet.

Bastion. A work consisting of two faces and two flanks, all the angles being salient. Two bastions are connected by means of a curtain, which is screened by the angle made by the prolongation of the corresponding faces of two bastions, and flanked by the line of defense. Bastions contain, sheltered by their parapets, marksmen, artillery, platform, and guards. They are protected by galleries of mines, and by demi-lunes and lunettes outside the ditch, and by palisades, if the ditch is inundated. The faces of the bastion are the parts exposed to being enfiladed by ricochet batteries, and also to being battered in breach.

BASTION, COMPOSED, is where two sides of the interior polygon are very unequal, which makes the gorges also unequal.

BASTION, CUT, is that which, instead of a point, has a re-entering angle.

BASTION, DEFORMED, is when the irregularity of the lines and angles puts the bastion out of shape; as, when it wants a demi-

gorge, one side of the interior polygon being too short.

BASTION, DEMI, is that which has only one face and one flank, cut off by the capital, —like the extremities of horn- and crown-works.

BASTION, DOUBLE, is that which is raised on the plane of another bastion.

BASTION, FLAT, is a bastion built in the middle of the curtain, when it is too long to be defended by the bastions at its extremes.

BASTIONS, HOLLOW, are those surrounded only with a rampart and parapet, having the space within unoccupied where the ground is so low that no retrenchment can be made in the centre in the event of the rampart being taken.

BASTION, REGULAR, is that which has true proportion of faces, flanks, and gorges.

BASTIONS, SOLID, are those which have the void space within them filled entirely, and raised of an equal height with the rampart.

Bastioned Fort. A fort having bastions.

Baston. A staff or cudgel formerly used in tournaments. In heraldry, a staff or cudgel generally borne as a mark of bastardy, and properly containing one-eighth in breadth of the bend-sinister.

Bat de Mulet (Fr.). A pack-saddle used on service when mules are employed to carry stores. *Aparejos* in the United States service are used for a similar purpose. See **PACK-SADDLES**.

Batage (Fr.). The time employed in reducing gunpowder to its proper consistency. The French usually consumed 24 hours in pounding the materials to make good gunpowder. Supposing the mortar to contain 16 pounds of composition, it would require the application of the pestle 3500 times each hour. The labor required in this process is less in summer than in winter, because the water is softer.

Bataillon de la Salade (Fr.). A name formerly given in France to old corps which wore a peculiar kind of helmet called *salade*. See **SALADE**.

Batardeau (Fr.). A wall built across a ditch or fortification, with a sluice-gate by which the height of the water in the ditch on both sides may be regulated. To prevent this wall being used as a passage across the ditch, it is built up to an angle at the top, and armed with iron spikes; and to render the attempt to cross still more difficult, a tower of masonry is built on it.

Batavia and Batavian Republic. See **HOLLAND**.

Bateau (Fr.). A light boat.

Bateau-bridge. Is a floating bridge supported by bateaux or light boats. See **PON-TONS**.

Bateau d'Avant-garde (Fr.). A small light boat attached to the advance-guard of an army. It is 38 feet in length by 5 feet 6 inches in breadth.

Bate Isle. An island of Hindostan, belonging to the province of Guzerat, situated at the southwestern extremity of the Gulf of

Cutch. It was formerly a rendezvous for pirates, who were the dread of all traders on the western coast of India. In 1803 a naval force, consisting of a British frigate and two Bombay cruisers, succeeded in destroying several of the pirate boats and vessels; but an attack upon the castle, though conducted under the fire of the ships, was repulsed with some loss. In 1807 a treaty was entered into with the chiefs of the island, whereby they consented to relinquish their piratical practices.

Bath, Knights of the. See **ORDER OF KNIGHTS OF THE BATH**.

Bat-horse. A baggage horse which bears the bat or pack.

Bat-man. A servant in charge of the bat-horses. The term is now applied in the English service to a soldier who acts as servant to an officer.

Baton. A truncheon borne by generals in the French army, and afterwards by the marshals of other nations. Henry III. of France before he ascended the throne was made generalissimo of the army of his brother Charles IX., and received the baton as the mark of the high command, 1569.

Baton. A staff used by drum-majors of foot regiments.

Baton Rouge. A city of Louisiana. It was captured by the Federals August 5, 1862, after a fierce conflict.

Batourin. A town of Russia, 68 miles east of Tcheringov, on the Seim. It was the residing place of the hetman of the Ukraine Cossacks from 1699 to 1708; captured and sacked by the Russians in 1708.

Batta. An allowance made to military officers in the service of the East India Company in addition to their pay. See **HALF-BATTA**.

Battalia. The order of battle; disposition or arrangement of troops, brigades, regiments, battalions, etc., as for action. Formerly the term applied to the main body of an army in array, as distinguished from the wings.

Battailant. Equipped for battle; warlike; a combatant. This word is now obsolete.

Battalion. A body of troops, so called from being originally a body of men arranged for battle; consisting in European armies of about 800 or 1000 men; in the U. S. service, an aggregation of from two to twelve companies.

Battard. An early cannon of small size.

Batten. The sloping of a wall which brings the perpendicular from the top inside the base.

Batter. A cannonade of heavy ordnance, from the first or second parallel of intrenchment, against any fortress or works. To batter *in breach* implies a heavy cannonade of many pieces directed to one part of the revetment from the third parallel.

Batterie en Rouage (Fr.). Is an enfilading battery, when directed against another battery.

Battering. In military affairs, implies the firing with heavy artillery on some fortification or strong post possessed by an enemy, in order to demolish the works.

Battering Charge. The charge of powder used in battering. The heaviest charge used in a gun.

Battering-pieces. Are large pieces of ordnance, used in battering a fortified town or post.

Battering-ram. In antiquity, a military engine used to batter and beat down the walls of places besieged. There were two different kinds of battering-rams, one rude and plain, the other compound. The former seems to have been no more than a great beam, which the soldiers bore on their arms and shoulders, and with one end of it, by main force, assailed the walls. The compound ram was a large beam with a head of iron, which was sometimes made to resemble the head of a ram. It was suspended by ropes to a beam supported by posts, and balanced so as to swing backwards and forwards, and was impelled by men against the wall. These rams were sometimes 120 feet in length.

Battering-train. A train of artillery used solely for besieging a strong place, inclusive of mortars and howitzers. See **SIEGE-TRAIN**.

Battery. A battery consists of two or more pieces of artillery in the field. The term battery also implies the emplacement of ordnance destined to act offensively or defensively. It also refers to the company charged with a certain number of pieces of ordnance. The ordnance constitutes the battery; men serve it; horses drag it, and epaulments may shelter it.

AMBULANT BATTERY, heavy guns mounted on traveling carriages, and moved as occasion may require, either to positions on the coast or in besieged places.

BARBETTE BATTERIES are those without embrasures, in which the guns are raised to fire over the parapet.

BATTERY D'ENFILADE is one that sweeps the whole length of a line, or the face or flank of any work.

BATTERY DE REVERSE is one which plays upon the rear of the troops appointed to defend a place.

BATTERY EN ECHARPE is that which plays obliquely.

BREACHING BATTERY. See **BREACH**.

COVERED, or MASKED BATTERY is when the cannon and gunners are covered by a bank or breastwork, commonly made of brushwood, fagots, and earth.

CROSS-BATTERIES are two batteries which play athwart each other upon the same object, forming there an angle, and battering with more effect, because what one battery shakes the other beats down.

FACINE and GABION BATTERIES are batteries constructed of those machines where sods are scarce, and the earth very loose and sandy.

FLOATING BATTERIES are such as are

erected either on rafts or on the hulls of ships.

GUN-BATTERY is a defense constructed of earth faced with green sods or fascines, sometimes of gabions filled with earth. It consists of a breastwork, epaulment, or parapet; the open spaces through which the muzzles of the cannon are pointed are called *embrasures*, and the solid masses between the embrasures, *merlons*; the *genouilleres* are those parts of the parapet which cover the carriage of the gun. The platforms are plank floors made to prevent the cannon from sinking into the ground; they are made with a slope to check the recoil of the guns, and to render it more easy to bring them forward again when loaded.

HALF-SUNKEN BATTERY. This term is applied to a battery in which the earth to form the parapet is derived partly from a ditch in front and partly from the excavation of the terre-plein. See **ARTILLERY**, also **CAVALIER**.

MORTAR-BATTERIES differ from gun-batteries in this, that the parapets have no embrasures, and the platforms have no slope, but are exactly horizontal; the shells being fired quite over the parapet, commonly at an elevation of 45°.

OPEN BATTERY is a number of cannon, commonly field-pieces, ranged in a row abreast on some natural elevation of ground, or on an artificial bank raised for that purpose.

RAISED BATTERY, one whose terre-plein is elevated considerably above the ground.

REDAN BATTERIES are such as flank each other at the salient and re-entrant angles of a fortification.

RICOCHET BATTERY, so called by its inventor Vauban, was first used at the siege of Aeth in 1697. It is a method of discharging cannon with a very small charge of powder, and with just elevation enough to fire over the parapet. When properly managed its effects are most destructive; for the shot, rolling along the opposite rampart, dismounts the cannon and disperses or destroys the troops. Ricochet practice is not confined to cannon alone; small mortars and howitzers may be effectually employed for the same purpose.

SUNKEN BATTERY, where the sole of the embrasures is on a level with the ground, and the platforms are consequently sunk below it.

Battery-boxes are square chests or boxes, filled with earth or dung; used in making batteries, where gabions and earth are not to be had. They must not be too large, but of a size that is governable.

Battery-wagon. It consists, besides the limber, of a long-bodied cart with a round top, which is connected with the limber in the same way as all other field-carriages. The lid opens on hinges placed at the side; and in the rear is fixed a movable forage-rack for carrying along forage. One of these wagons accompanies each field battery, for

the purpose of transporting carriage-maker's and saddler's tools, spare parts of carriages, harness, and equipments, and rough materials for replacing different parts. Both it and the forge are made of equal mobility with the other field-carriages, in order to accompany them wherever they may be required to go. See **ORDNANCE, CARRIAGES FOR.**

Battery, Electric. The apparatus used to generate a current of electricity.

Battery, or Traveling Forge. See **ORDNANCE, CARRIAGES FOR.**

Battery Gun. A gun capable of firing continuously a great number of shots in a short time. Applied to guns mounted upon tripods, stands, swivels, or carriages. A *magazine cannon* in contradistinction to a *magazine small-arm*. Also called *machine gun* and *mitrailleuse*. Guns of this kind existed as early as the 14th century. From the arrangement of the barrels they were called *killing organs*. They have always been used in various forms, but were comparatively inefficient till recent times, when the introduction of the metallic cartridge gave the subject a new importance.

Puckle's revolver, 1718, was ingeniously mounted upon a tripod with good elevating and traversing arrangements. It had one barrel and a movable rotating breech containing nine charges. These were fired in succession, and a new breech, ready charged, was slipped on. Two kinds of bullets were used,—round bullets against Christians and square ones for Turks.

Winans's steam gun, invented about 1861 by the celebrated American inventor and engineer Thomas Winans, of Baltimore, was a battery gun of large calibre. The shot fell from a hopper into a breech-chamber, and were projected through the barrel by the sudden admission behind it of steam under enormous pressure.

The *infernal machine* with which Fieschi killed Marshal Mortier and a large number of others in his attempt to assassinate Louis Philippe, in 1835, was a crude form of battery gun, consisting of a row of gun-barrels fired by a train of powder. Many battery guns are of this type.

The *Requa battery*—American—used in the civil war, 1861–65, consisted of a row of 24 barrels on a wheel-carriage, so arranged as to give either parallel or divergent fire. It was breech-loading, the cartridges being forced into the barrels by a transverse bar worked by levers. It was capable of seven volleys a minute.

One of the forms of *mitrailleuse* used in the Franco-Prussian war was very much the same. The loading-bar was rotating, and had two sets of chambers. One set was fired while the other was being loaded.

The *Abbottini gun* used in Europe has 10 barrels arranged as in the Requa battery. It is worked by a crank. The cartridges are conveyed by mechanical devices from a box magazine to the rear of the barrels.

The form in which a *cluster of barrels* is used was probably first introduced in France, and was made by inserting 25 gun-barrels into the bore of a brass field-piece, into the breech of which a slot was cut, the open rear ends of the barrels being flush with the front wall of the slot. A cylinder-case containing cartridges being placed in the slot, a set of plungers pushed the cartridges into the barrels. The case was then replaced by a firing-block containing a lock and pin for each cartridge.

This was improved by mounting the barrels (37) without the casing and replacing the cartridge-case by a steel block in which the cartridges were fired without being pushed into the barrels.

The first successful gun in which the *cluster of barrels* was made to revolve was the Gatling. (See **GATLING GUN.**) In this both the barrels and the locks revolve. The Gatling gun in its various forms is used by all the leading nations of Europe. It is used in a variety of ways for field service, mountain service, flank defense of fortifications, in the main-tops of ships, etc. It has been mounted upon the backs of camels, on tripods, swivels, and field-carriages. In Europe its principal rival is the *Nordenfellt*, in which the barrels are stationary and the breech mechanism works horizontally. It is probably superior to the Gatling in the amount of metal thrown in a given time. In mechanism and accuracy it is inferior. Its principal claim to superiority is that it fires either volleys or single shots. The recoil, which is always great in volley-guns, requires a very heavy stand, making it clumsy and unwieldy compared to the Gatling. Accidents have also happened in its use from defective mechanism. Among other American battery or machine guns are the *Lowell* and *Gardner*, both of which have won enviable reputations. A late form of the Gardner consists of two barrels fixed in a brass casing, giving it the external appearance of an ordinary field-piece. It has less rapidity of fire (its maximum being about 357 shots a minute) than some other guns, but it is simple, strong, and efficient.

The *Taylor gun* was something like the Nordenfellt in principle, having a fixed cluster of barrels and a sliding breech mechanism, firing volleys or single shots at discretion. A later form of Taylor gun has the barrels in a horizontal row. The improvement consists in rapidity of loading. The cartridges are carried in the ordinary paper or wooden cases, exposing the heads. The gun has a number of upright pieces at the breech with grooves between them. By drawing the cartridge-case downward over these uprights the cartridges are caught in the grooves by their flanged heads. They fall by gravity, and are conducted by suitable devices in grooved channels to the barrels. This gun, it is believed, fires more shots a minute than any other, but its me-

chanism is not so perfect as several of its rivals.

The *Hotchkiss revolving cannon* has the largest calibre of the modern machine guns. It differs from the Gatling in having but one lock for all the barrels. It is worked by a crank like the Gatling, but the mechanism is such that during a part of the revolution of the crank the barrels are stationary. It is during this time that one cartridge is fired and another case extracted. The rapidity of fire is much less than the Gatling and most others, but in perfection of mechanism, accuracy, and other qualities, it is unsurpassed. A peculiar form of brake is fitted to the wheels of the field-gun to prevent the recoil from moving the carriage. For the larger sizes both shells and canister are used. The metallic cartridge-case is of brass. This gun is the invention of B. B. Hotchkiss, an American, now residing in Paris. His guns are made at the Hotchkiss Works, near that city, and have been adopted for flank defense of fortifications and for naval use by several of the continental powers.

Battle. An action or engagement between the forces of two armies. A battle is either general or partial; general, where the whole or the greater part of each army is brought into action; and partial, where only brigades, divisions, or *corps d'armée* are engaged. But, however the numbers may vary, the great principles to be applied in delivering battle are in almost every case the same. Palamedes of Argos is said to have been the first who ranged an army in order of battle, placed sentinels round a camp, and excited the soldier's vigilance by giving him a watch-word.

BATTLES may be arranged into three general classes, *defensive*, *offensive*, and *mixed* battles. In a purely *defensive* battle, an army chooses a position in which to await the enemy, and there to give battle with no other end in view than to hold this position and repulse the enemy. In a purely *offensive* battle, an army seeks the enemy and attacks him wherever he is to be found. A *mixed* battle, is a combination of these two. The most common case of this last class is that in which a position is selected beforehand, where the army awaits the attack of the enemy, and, at a suitable moment, moves from it, and attacks the assaulting columns. This case is sometimes known as a *defensive-offensive* battle. Details of particular battles and engagements are given under their respective headings in this work.

Battle-Abbey. In Sussex, England; founded by William I. 1067, on the plain where the battle of Hastings was fought, October 14, 1066. It was dedicated to St. Martin, and given to Benedictine monks, who were to pray for the souls of the slain. The original name of the plain was Hetheland. After the battle of Hastings, a list was taken of William's chiefs, amounting to 629, and called the *Battle-Roll*; and among these chiefs the lands and distinc-

tions of the followers of the defeated Harold were distributed.

Battle-array. Array or order of battle; the disposition of forces preparatory to a battle.

Battle-axe. A weapon much used by the early northern nations, Celtic and Scandinavian, requiring great strength in its use. Some were held with one hand, some with two; the former kind could be wielded equally by horse and foot, but the latter was for foot soldiers only. The battle-axe has a longer handle, and a broader, stronger, and sharper blade than the common axe. During the Middle Ages and somewhat earlier, it was much used in sorties, and to prevent the escalading of a besieged fortress. The *pole-axe* differed but little from the battle-axe. The *black-bill* and *brown-bill* were a sort of halbert, having a cutting part like a woodman's bill, with a spike projecting from the back, and another from the head. The *glaive* was a kind of pole-axe or bill used by the Welsh.

Battle-cries. See WAR-CRIES.

Battle-ground. A village of Tippecanoe Co., Ind., where the battle of Tippecanoe was fought, November 7, 1811, between Gen. Harrison and the Indians under the chief Tecumseh and his brother the "Prophet."

Battlements. The indentations in the top of old castles, or fortified walls, in the form of embrasures, for the greater convenience of firing or looking through.

Battle of the Giants. See MARIIGNANO.

Battle of the Herrings. A name given by historians to an engagement which took place February 12, 1429, in which Sir John Fastolfe, an English general at the head of 1500 men, gained a victory over 6000 Frenchmen near Orleans, and brought a convoy of stores in safety to the English camp before that place. The stores comprised a large quantity of herrings.

Battle of the Nations. See LEIPSIC.

Battle of the Spurs. A name given to the battle of Courtrai (which see); also to that of Guinegate. See GUINEGATE.

Battle of the Standard. A name given to a battle between the English and Scotch at Northallerton (which see).

Battle of the Thirty. A name given in English and French history to a celebrated engagement which took place at a spot known as Midway Oak, half-way between the castles of Josselin and Ploermel, in France, March 27, 1551. The French general Beaumanoir, commanding at the former place, being enraged at the English general Bemborough, occupying the latter position, challenged him to fight. Upon this it was agreed that 30 knights of each party should meet and decide the contest. At the first onset the English were successful, but Bemborough having been killed, the French renewed the struggle with redoubled courage, and finally won the victory.

Battle-range. The range corresponding

to the maximum "dangerous space" for the trajectory of any fire-arm. This range is somewhat greater for such fire-arm employed against mounted troops than against foot troops. For instance, it is 262 yards for the Springfield rifle (calibre .45) when used against foot troops, and represents the extreme range for which the rear sight may be set so as to cover such foot troops continuously between that point and the firer. There is also a "dangerous space" of 75 yards behind that point for the foot soldier; hence the maximum "dangerous space" is 337 yards, and is a continuous one. For the same arm and against cavalry, the "battle-range" is 291 yards, corresponding to a maximum continuous "dangerous space," front and rear, of $(291 + 95 =)$ 386 yards. For the carbine (cal. .45) against infantry, this range is 204 yards, and the maximum "dangerous space" is 300 yards. Upon the latest model sights (1879) for these two fire-arms, the letter "B" is placed opposite the "battle-range" elevation, and indicates the most suitable one for firing at an enemy's line of battle; with this elevation and the aim taken at the foot, the enemy will be hit wherever he may be within a range of about 400 yards. The most effective fire, and one covering the greatest zone of continuous "dangerous space," can be secured by causing troops to lie down, to fire at the feet of the opposing line, and to use the "battle" elevation. The zone then swept will be round about 500 yards for troops armed with the service rifle. See DANGEROUS SPACE.

Battle, The Fearless. An engagement between the Lacedæmonians under Archidamus III. and the Arcadians.

Battre (Fr.). To direct one or more pieces of ordnance in such a manner that any given object may be destroyed or broken into by the continued discharge of cannon-ball, or other warlike material; it likewise means to silence an enemy's fire.

Battre de Front (Fr.). To throw cannon-balls in a perpendicular or almost perpendicular direction against any body or place which becomes an object of attack. This mode of attack is less effectual than any other unless *battering in breach*.

Baulois. A piece of punk stuff, used by miners for firing the saucision, or train.

Bavaria. A kingdom in South Germany; conquered from the Celtic Gauls by the Franks, between 680 and 690. The country was afterwards governed by dukes subject to the French monarchs. Tasillon II. was deposed by Charlemagne, who established margraves in 788. Henry the Lion, duke of Saxony, Bavaria, and Brunswick, was dispossessed in 1180 by the emperor Frederick Barbarossa (who had previously been his friend and benefactor.) Bavaria supported Austria in the contest with Prussia in June, 1866, and took part in the war; made peace with Prussia August 22. Took part with Prussia against the French in the Franco-Prussian war, 1870.

Bavier. The beaver of a helmet.

Bavin. The old word for fascine.

Bayberry Tallow. A product of the wax myrtle, used as lubricant for bullets.

Bayeux. A city in the department of Calvados, France, 17 miles west-northwest of Caen; captured and sacked by Henry I. of England in 1106; by Philip of Navarre in 1356; the English took possession of it, 1450; the Protestants in 1561; Lamoricière for the League in 1589, and the Duke of Montpensier in 1590.

Baylen. A town in Southern Spain, where on July 20, 1808, the French, commanded by Gens. Dupont and Wedel, were defeated by the Spaniards under Reding, Coupigny, and other generals, whose force amounted to 25,000.

Bayonet. A triangular dagger, made with a hollow handle and a shoulder, to fix on the muzzle of a rifle, so that its presence does not impede either the charging or firing of the piece. It is said to have been invented at Bayonne, in France, about 1647, 1670, or 1690. It was used at Killiecrankie in 1689, and at Marsaglia by the French in 1693, "with great success against the enemy, unprepared for the encounter with so formidable a novelty." Bayonets are sometimes made in other shapes. See SWORD-BAYONET and TROWEL-BAYONET.

Bayonet Exercise. A drill in fencing with the bayonet fixed on the gun.

Bayonet Scabbard. A leather or metallic case for carrying the bayonet suspended from the belt.

Bayonne. An ancient city in Southern France, at the confluence of the Adour and Nive; held by the British from 1295 till it was taken by Charles VII. The queens of Spain and France met here in 1565 the cruel Duke of Alva, it is supposed to arrange the massacre of St. Bartholomew. Charles IV. of Spain abdicated here in favor of his "friend and ally," the emperor Napoleon, May 4, 1808. In the neighborhood of Bayonne was much desperate fighting between the French and English armies, December 10, 11, and 18, 1813; invested by the British January 14, 1814; on April 14, the French made a sally and attacked the English with success, but were at length driven back. The loss of the British was considerable, and Lieut.-Gen. Sir John Hope was wounded and taken prisoner.

Bayou. A long and narrow place; a branch of a trench in fortification; a hose or leathern pipe; the outlet of a lake; a channel for water.

Baza. A city in Andalusia, Spain; it was taken by the Spaniards under Ferdinand V. from the Moors in December, 1489, after a siege of nearly seven months; in 1810 the Spaniards under Gens. Blake and Freire were defeated by the French under Marshal Soult.

Bazar. The sutler establishment which accompanies a native regiment in the India service wherever it goes.

Baseilles. A village in the Ardennes, Northeast France. During the dreadful battle of Sedan, September 1, 1870, Baseilles was burnt by the Bavarians, and outrages committed. Of nearly 2000 inhabitants scarcely 60 remained alive, and these indignantly denied having given provocation. The cause of provocation appears to have been that an old woman whose husband and sons had been killed had fired upon and killed two Bavarians.

Bazoche-des-Hautes. Near Orleans, Central France. Here a part of the army of the Loire, under Gen. d'Aurelle de Paladines, was defeated after a severe action by the Germans under the Grand Duke of Mecklenburg, December 2, 1870.

Beach-master. Formerly a superior officer, appointed to superintend the disembarkation of an attacking force, who holds plenary powers, and generally leads the storming-party. His acts when in the heat of action are unquestioned.

Beachy Head. A promontory, Southeast Sussex, England, near which the British and Dutch fleets, commanded by the earl of Torrington, were defeated by a superior French force under Admiral Tourville, June 30, 1690; the allies suffered very severely. The Dutch lost 2 admirals, 500 men, and several ships,—sunk to prevent them from falling into the hands of the enemy; the English lost 2 ships and 400 men. The admirals on both sides were blamed,—the English for not fighting, the French for not pursuing the victory.

Beacon. A signal-fire to notify the approach of an enemy.

Bear. In a military sense, a piece of ordnance is said to *bear*, or *come to bear*, or is *brought to bear*, when pointed directly against the object; that is, pointed to hit the object.

Bear, Order of. Was a military order in Switzerland, instituted by the emperor Frederick II. in 1218, by way of acknowledgment for the service the Swiss had done him, and in favor of the abbey of St. Gall. To the collar of the order hung a medal, on which was represented a bear raised on an eminence of earth.

Beard. The reflected points of the head of an ancient arrow, particularly of such as were jagged.

Beat. In a military sense, to gain the day, to win the battle, etc.

Beating the Wind. Was a practice in use in the ancient method of trial by combat. If one of the combatants did not appear in the field at the time appointed, the other was to make so many flourishes with his weapon, by which he was entitled to all the advantages of a conqueror.

Beaucéant, or Beaucient (Fr.). Standard of the Knights Templar; it was white on one side and black on the other.

Beaugency. An ancient town of France, in the department of Loiret, and situated on the right bank of the Loire. It was at one

time surrounded by walls, flanked with towers and bastions, and defended by a strong castle, now ruined. In the history of the wars of France Beaugency occupies a conspicuous place; it was successively in the hands of the Huns, Saxons, Normans, and English, but the town sustained most damage during the religious wars of the 16th century.

Beaumont. A town in the department of the Somme, France; here the French routed the allies, June 16, 1815.

Beaumont. A village near Sedan, department of Ardennes, Northeast France. Near here a part of the army of Marshal MacMahon, under De Failly, which, after vainly endeavoring to reach Metz, was retreating before the Germans under the crown prince of Prussia, was surprised, defeated, and driven across the Meuse at Mouzon, August 30, 1870. The French loss included about 7000 prisoners, many guns, and much camp equipage. The victory was chiefly gained by the Bavarians.

Beaune-la-Rolande. A village in the Loiret, France. Here the French army of the Loire under Gen. d'Aurelle de Paladines was defeated by the Germans under Prince Frederick Charles, in an attempt to march in the direction of Fontainebleau, to relieve Paris, November 28, 1870. The French loss was reported by the Germans to be 1000 dead and 4000 wounded, with more than 1700 prisoners. Their own loss was also heavy.

Beauvais (Northern France). The ancient *Bellovac*, formerly capital of Picardy. When besieged by Charles the Bold, duke of Burgundy, with 80,000 men, the women under Jeanne Fourquet or Lainé, also called de la Hachette, from her using that weapon, particularly distinguished themselves, and the duke raised the siege, July 10, 1472. In memory of this, the women of Beauvais walk first in the procession on the anniversary of their deliverance.

Bebra. A sort of javelin, used by the ancient Germans; it was an imitation of the *pilum* of the Romans.

Bec de Corbin (Fr.). A kind of halbert formerly used by the body-guards of the kings of France.

Bechlis. Light cavalry of the Turks, composed of picked men and horses.

Bedaines (Fr.). Stone bullets which were thrown from catapults during the Middle Ages.

Bednore, or Nuggur. A large city of Mysore, India. In 1768 it was taken and pillaged by Hyder Ali, who subsequently made it the seat of his own government. It was taken by the British under Gen. Matthews in 1783, but was soon retaken by Tippoo, at the head of a vastly superior force, when Gen. Matthews and all the principal British officers were put to death.

Bedouins. Wandering tribes of Arabs, living on the plunder of travelers, etc. They profess a form of Mohammedanism, and are

governed by sheikhs. They are said to be descendants of Ishmael.

Beds. Are receptacles for ordnance of large calibre,—*mortar-beds* serve the same purpose as gun-carriages. They are made of solid timber, consisting generally of two pieces fastened together with strong iron bolts and bars. Their sizes depend on the kind of mortar they carry. The beds for the smaller mortars are made of one solid block only. The reason that a bed is used for a mortar instead of a wheel-carriage is on account of the high elevation at which a mortar is usually fired, when the recoil, instead of forcing the piece backwards, tends to force it downwards, and this tendency becomes so great at the higher angles that no wheel-carriage could long sustain the shock.

Beeren, Gross. A village of Prussia, 11 miles east-southeast of Potsdam, well known as the scene of a great victory gained by the Prussians over the French on August 22-23, 1813.

Beetles. In a military sense, are large wooden hammers for driving down palisades, and for other uses.

Beetlestock. The stock or handle of a beetle.

Befort, or Belfort. A fortified town in the department of Haut-Rhin, France; sustained several sieges; taken by the Austrians in 1814. Its citadel was constructed by Vauban.

Beg, or Bey. A Turkish title, rather vague in its import, and commonly given to superior military officers, ship-captains, and distinguished foreigners. More strictly, it applies to the governor of a small district, who bears a horse-tail as a sign of his rank. *Beglerbeg*, or more correctly *Beilerbegi* ("lord of lords"), is the title given to the governor of a province who bears three horse-tails as his badge of honor, and has authority over several *begs*, *agas*, etc.

Begkos, or Beikos. A large village of Anatolia, on the Bosphorus, 8 miles north-northeast of Scutari; said to be the locality of the contest between Pollux and Amycus, in which the latter was killed. At the commencement of the Crimean war, the allied fleets anchored in Begkos Bay, prior to their entering the Black Sea, in January, 1854.

Behourd, Bihourt, or Bohourt (Fr.). This name was given during the Middle Ages, to a combat on horseback, lance in hand; also a tilting of cavaliers, which took place at public amusements.

Beilan. A town and mountain-pass of Syria at its northern extremity, on the east side of the Gulf of Iskanderoun. Here the Egyptian troops totally defeated the Turks in 1832.

Belbeys, or Belbeis. A town of Lower Egypt, on the eastern arm of the Nile, 28 miles north-northeast of Cairo; it is inclosed by earthen ramparts, and is a station on the route from Egypt to Syria.

During the expedition of the French into Egypt, Gen. Bonaparte had the ancient fortifications repaired.

Beleaguer. To invest a town or fortress, so as to preclude escape; to besiege; to blockade.

Belem. A town of Portugal, on the right bank of the Tagus, near Lisbon. It is historically interesting as the place from whence Vasco de Gama set sail on his voyage of oriental discovery; it was taken in November, 1807, by the French, the royal family of Portugal embarking from its quay for Brazil as they entered; in 1833, it was occupied by Don Pedro's troops.

Belemnon. A dart used by the ancient Grecians.

Belfry, or Beffroi. Among military writers of the Middle Ages, a movable tower, often several stories high, erected by besiegers for purposes of attack and defense.

Belgian-fuze. See BORMANN-FUZE.

Belgium. Late the southern portion of the kingdom of the Netherlands, and anciently the territory of the Belgæ, who were finally conquered by Julius Cæsar, 61 B.C.; a revolution commenced at Brussels, August 25, 1830; Antwerp taken (except the citadel), December 23, 1830. The king of the Netherlands commenced war August 3, 1831, but France sent 50,000 troops to assist Belgium, which effected an armistice. Antwerp was taken by the French, December 23, 1832, and the French army returned to France immediately after. For previous history, see FLANDERS.

Belgrade. An ancient city in Servia, on the right bank of the Danube. It was taken from the Greek emperor by Solomon, king of Hungary, in 1086; gallantly defended by John Huniades, against the Turks under Mahomet II., July to September, 1456, when the latter was defeated with the loss of 40,000 men; it was taken by Sultan Solymán, 1521, and retaken by the Imperialists in 1688, from whom it was again taken by the Turks, 1690; besieged in May, 1717, by Prince Eugene. On August 5, of that year, the Turkish army, 200,000 strong, approached to relieve it, and a sanguinary battle was fought at Peterwardein, in which the Turks lost 20,000 men; after this battle Belgrade surrendered. In 1739 it was ceded to the Turks, after its fine fortifications had been demolished; retaken in 1789, and restored at the peace of Reichenbach in 1790. The Servian insurgents had possession of it in 1806; in 1815, it was placed under Prince Milosch, subject to Turkey; the fortifications were restored in 1820; the fortress was surrendered by the Turks to the Servians about August, 1867.

Belier (Fr.). A battering-ram, invented by the Carthaginians about 441 B.C.; used in ancient times for siege purposes. Also a wooden machine for driving wedges under a ship's bottom.

Bellair. In North America; this town

was attacked by the British forces under Sir Peter Parker, who, after an obstinate engagement, were repulsed with considerable loss; their gallant commander was killed August 30, 1814.

Belle-Alliance. A farm-house on the field of Waterloo, Belgium; it is situated on the right side of the high-road to Brussels and about two miles from Mount-Saint-Jean. Here Napoleon marshaled his guards for their last effort at Waterloo; and here Wellington and Blücher met after the battle was gained by the allies.

Bellegarde. A hill fortress of France, in the department of the Pyrénées Orientales. Here the French under Philip III. were defeated by Peter III. of Aragon, in 1285; captured by the Spaniards in 1674, and again by the French under Marshal Schomberg, in 1675; blockaded and taken by the Spaniards under Ricardos, but was retaken by the French in the following year.

Belleisle. An isle on the southeast of Brittany, France, erected into a duchy for Marshal Belleisle in 1742, in reward of his military and diplomatic services, by Louis XV. Belleisle was taken by the British forces under Commodore Keppel and Gen. Hodgson, after a desperate resistance, June 7, 1761; restored to France in 1768.

Belley, Bellica, Bellicum, or Bellicium. A town in the department of Ain, France, 39 miles east from Lyons, formerly fortified. Belley served as a place of arms to Cæsar against the Allobroges; burned by Alaric in 390; it was in the possession of the dukes of Savoy; it was ceded to France in 1601.

Belligerent. In a state of warfare. Hence any two or more nations at war are called belligerent powers.

Bellinzona. A town in the Swiss canton of Ticino, on the river Ticino. It has several castles, and was captured and recaptured several times by the Germans, Swiss, and French.

Bellipotent. Powerful or mighty in war.

Bell-metal. An alloy of about 78 parts copper and 22 of tin, used in making bells. It is harder and more sonorous than gun-metal, but much more brittle.

Bellovac. The most powerful of the Belgæ, dwelt in the modern *Beauvais*, between the Seine, Oise, Somme, and Bresle. In Cæsar's time they could bring 100,000 men into the field, but they were subdued by Cæsar with the other Belgæ.

Bellows-house. See **ORDNANCE, CARRIAGES FOR, TRAVELING FORGE.**

Bells of Arms. In the British service, are tents in front of the quarters of each company of infantry, in which the arms are piled. In Indian cantonments, the bells of arms are of masonry.

Beloochistan, Southern Asia. The ancient *Gedrosia*. The capital, Kelât, was taken by the British in the Afghan war, in 1839; abandoned in 1840; taken and held for a short time in 1841.

Belt, Great. A strait forming the central

communication between the Baltic and the Cattegat; it separates the island of Funen from that of Seeland. In the winter of 1658, while frozen, it was crossed by Gustavus Adolphus, king of Sweden, and his army, on his way to besiege Copenhagen.

Belts. Leathern suspenders of different sorts and for various purposes, viz.: *sword belts*, to which swords hang; *shoulder or cross belts*, broad leathern belts, crossing from the right shoulder, and to which the pouch is affixed; and leathern straps fixed round the waist, by which a sword or bayonet is suspended.

Benares. A holy city of the Hindoos in India; it was ceded by the nabob of Oude to the English in 1755; the scene of an insurrection in 1781, which nearly proved fatal to the British interests in Hindostan. In June, 1857, Col. Neil succeeded in suppressing attempts to join the Sepoy mutiny.

Ben-Azzedin. A place in Algiers, where the French fought the Kabyles, September 9, 1848.

Benburb. Near Armagh (Northern Ireland). Here O'Neill totally defeated the English under Monroe, June 5, 1646. Moore says that it was "the only great victory since the days of Brian Boru achieved by an Irish chieftain in the cause of Ireland."

Bend. In heraldry, is one of the ordinaries, or more important figures. It is formed of two parallel lines drawn from the dexter to the sinister base, and consequently passing athwart the shield. It is supposed to represent a shoulder-belt, or scarf worn over the shoulder.

Bender (Bessarabia, European Russia). Was the asylum of Charles XII. of Sweden after his defeat at Pultowa by the czar Peter the Great, July 8, 1709. The peace of Bender was concluded in 1711; it was taken by storm, by the Russians, in September, 1770; again taken by Potemkin in 1789; and again stormed in 1809. It was restored at the peace of Jassy, but retained at the peace of 1812.

Benevento. A small town of the province of Alentejo, Portugal, where Lord Paget, afterwards Marquis of Anglesea, in 1808, greatly distinguished himself by a brilliant cavalry action, against the French under Marshal Soult; when Gen. Lefebvre Desnouettes, who commanded the advanced guard of the French forces, was taken prisoner.

Benevento (anc. Beneventum). An ancient city in South Italy, said to have been founded by Diomedes the Greek, after the fall of Troy; Pyrrhus of Macedon, during his invasion of Italy, was totally defeated near Beneventum, 275 B.C. At a battle fought here, February 26, 1266, Manfred, king of Sicily, was defeated and slain by Charles of Anjou, who thus became virtually master of Italy. It was seized by the king of Naples, but restored to the pope, 1773; it was taken by the French in 1798, and restored to the pope in 1814.

Bengal. Chief presidency of British India, containing Calcutta, the capital. Its governors were delegated by the sovereigns of Delhi till 1840, when it became independent. It was added to the Mogul empire by Baber about 1529.

Beni-Abbes. An Algerian tribe who fought the French, May 18, 1847.

Beni-Achour. An Algerian tribe who were defeated by the French, September 22, 1848.

Benicke. A kind of military fête among the Turks, similar to a tournament, but without the presence of ladies.

Beni-Mered. An Algerian tribe who were defeated by the French, May 27, 1838.

Beni-Yala. An Algerian tribe who were chastised by the French, May 31, 1847.

Ben-Nahr. A place in Algeria where the French defeated the Arabs, February 7, 1846.

Bennington. A post-township of Bennington Co., Vt., 117 miles southwest of Montpelier. Here a detachment of the English army under Gen. Burgoyne were defeated by the Americans under Gen. Stark, August 16, 1777, and 600 prisoners captured.

Ben-Tijour. A place in Algeria where the French engaged the Arabs, September 22, 1848.

Bentonville. A village in Johnston Co., N. C. Here part of the army of Gen. Sherman encountered a Confederate army (40,000 strong) under Gen. Johnston, March, 1865. The attack was made by Gen. Johnston on the left wing of the Federal army with the intention of overwhelming it before it could be relieved. Six assaults were gallantly sustained by the Federals against the combined forces of Gens. Hoke, Hardee, and Cheatham. During the night Gen. Slocum received reinforcements which rendered his position impregnable. On March 21, Gen. Sherman ordered a general attack by his skirmish-line, and the ensuing night Johnston retreated towards Smithfield, leaving his pickets to fall into Gen. Sherman's hands. The Federal loss was 1646; the Confederate loss is unknown, but about 1800 prisoners were taken by the Union forces.

Beraun. A walled town of Bohemia, capital of a circle, on the Beraun River. Here the Austrians defeated the Prussians in 1744.

Berbers. The general name usually given to the tribes inhabiting the mountainous regions of Barbary and the northern portions of the Great Desert. They were conquered in succession by the Phenicians, Romans, Vandals, and Arabs. They are of middle stature, sparely but strongly built; complexion varies from a red to a yellow brown; hair is, in general, dark, and eyes dark and piercing. Their manners are austere, and in disposition they are cruel, suspicious, and implacable. They are usually at war with their neighbors or among themselves.

Beresina, or Berezina. A river in Russia, crossed by the French main army after

its defeat by the Russians, November 25-29, 1812. The French lost upwards of 20,000 men, and their retreat was attended by great calamity and suffering.

Bereung. A description of Swedish militia, consisting of every man in the kingdom, from 20 to 25 years of age, capable of bearing arms.

Bergamo. A fortified city of Lombardy, Italy; captured by the French in 1698. During the height of the Venetian power, Bergamo was a dependency on its territory; under Napoleon, it was the capital of the department of Serio.

Bergedorf. A town of North Germany; it was taken from the Duke of Saxe-Lauenberg in 1736 by the cities of Hamburg and Lubeck; recaptured in 1412; and again taken by the same two cities in 1720.

Bergen. A small town in Germany, about 5 miles from Frankfort. Here the French, under the Duke of Broglie, defeated the allies under the Duke Ferdinand of Brunswick, April 13, 1759. The allies lost 2500 killed and wounded, and the French lost about 1800.

Bergen. A town in Holland. Here the allies under the Duke of York were defeated by the French, under Gen. Brune, with great loss, September 19, 1799. In another battle fought October 2, the same year, the duke gained the victory over Brune; but on the 6th, the duke was defeated before Alkmaar, and on the 20th entered into a convention, by which his army was exchanged for 6000 French and Dutch prisoners in England.

Bergen-op-Zoom, or Berg-op-Zoom. A strongly-fortified town of Holland, in North Brabant, on the river Zoom. In 1586 it was unsuccessfully besieged by the famous Duke of Parma, and afterwards, in 1622, it defied the utmost attempts of Spinola, who was forced to abandon the enterprise after a siege of ten weeks, with the loss of 12,000 men. It was taken by the French under Count Lowendahl in 1747, and in 1795 was again occupied by them. An attempt made by the British under Gen. Sir T. Graham (afterwards Lord Lynedoch) to carry the fortress by storm was defeated; after forcing an entrance, their retreat was cut off, and a dreadful slaughter ensued; nearly all were cut to pieces or made prisoners, March 8, 1814.

Bergerac. A town in the department of Dordogne, France; it was formerly fortified, and sustained many sieges; taken by the English in 1845, and retaken by the Duke of Anjou in 1870. Its fortifications were razed by Louis XIII. in 1621.

Bergfried, Combat of. A combat which took place between the French and Russians, February 3, 1807, in which the latter were repulsed.

Bergues. A fortified town in the department of the North, France; it was captured and recaptured by the Spaniards and French; the last time by Turenne in 1658.

Berlin. Capital of Prussia, in the prov-

ince of Brandenburg; alleged to have been founded by the margrave Albert the Bear, about 1168. It was taken by an army of Russians and Austrians in 1760, but they were obliged to retire in a few days. On October 26, 1806, after the battle of Jena (October 14), the French entered Berlin; and from this place Napoleon issued the famous "Berlin decree" or interdiction against the commerce of England, November 20. On November 5, 1808, Napoleon entered into a convention with Prussia by which he remitted to Prussia the sum due on the war-debt and withdrew many of his troops to reinforce his army in Spain. An insurrection commenced here in March, 1848; a treaty of peace between Prussia and Saxony was signed on October 21, 1866.

Berme. A narrow path round fortifications between the parapet and the ditch, to prevent the earth from falling in.

Bermuda Hundred. In Chesterfield Co., Va., on the right bank of the James River, just above the mouth of the Appomattox. Here on May 16, 1864, the Federal forces under Gen. Butler were attacked by the Confederates under Beauregard, and after several hours' severe fighting Butler was compelled to fall back to his first line of intrenchments, with a loss of about 2500.

Bermuda Islands, or Bermudas. A group of islands in the North Atlantic Ocean, discovered by Juan Bermudez, a Spaniard, in 1527, but not inhabited until 1600, when Sir George Somers was cast away upon them. The Bermudas are garrisoned by British troops.

Bernard, The Great St. A famous mountain-pass of the Pennine Alps, so called from a monastery founded on it by Bernardine de Meuthon in 972. Velan, its highest peak, is about 8000 feet high, covered with perpetual snow. Hannibal, it is said, conducted the Carthaginians by this pass into Italy, 218 B.C.; and by the same route, in May, 1800, Bonaparte led his troops to Italy before the battle of Marengo, June 14, 1800.

Berne. The sovereign canton of Switzerland; joined the Swiss League in 1352; the town of Berne was made a free city by the emperor Frederick, May, 1218; it successfully resisted Rudolph of Hapsburg, 1288. It surrendered to the French under Gen. Brune, April 12, 1798; the town was made capital of Switzerland in 1848.

Berry (anc. *Bituricum regis*), Central France; held by the Romans since the conquest by Cæsar, 58-50 B.C., till it was subdued by the Visigoths; from whom it was taken by Clovis in 507.

Bersaglieri. The sharpshooters of the Sardinian army; first employed about 1848.

Berserker. A legendary Scandinavian hero of the 8th century, celebrated for his strength and valor. He fought without a coat of mail or helmet, whence his name. The name Berserker was also applied to a class of warriors who, under the influence of a sort of demoniac possession, fought naked,

performing marvelous feats of valor, unmindful or insusceptible of wounds.

Berwick-on-Tweed. A fortified town on the northeast extremity of England; the theatre of many bloody contests while England and Scotland were two kingdoms; it was claimed by the Scots because it stood on their side of the river; annexed to England in 1838; and after having been taken and retaken many times, was finally ceded to England in 1482; in 1651 it was made independent of both kingdoms; the town surrendered to Cromwell in 1648, and afterwards to Gen. Monk in 1659.

Besançon. A fortified city of France, capital of the department of Doubs; sacked by Attila; captured and ruined by the ancient Germans; rebuilt by the Burgundians; it was ceded to Spain by the peace of Westphalia; taken by Louis XIV. on May 16, 1670; united to France in 1678; in 1814 the Austrians besieged it without success.

Besiege. To lay siege to or invest any fortified place with armed forces.

Besieged. The garrison that defends the place against the army that lays siege to it.

Besiegers. The army that lays siege to a fortified place.

Bessarabia. A frontier province of European Russia, part of the ancient Dacia. After being possessed by the Goths, Huns, etc., it was conquered by the Turks in 1474, and ceded to Russia in 1812.

Bessemer Steel. See **ORDNANCE, METALS FOR.**

Bessi. A fierce and powerful Thracian people, who dwelt along the whole of Mount Hæmus as far as the Euxine. After the conquest of Macedonia by the Romans, 168 B.C., the Bessi were attacked by the latter, and subdued after a severe struggle.

Bethoron. A village of Palestine. Near here Judas Maccabæus gained advantages on two different occasions over the generals of Antiochus.

Bethsur. An ancient city of Palestine, now extinct. The Syrian general Lysias captured it, 163 B.C., after a severe combat in which Eleazar, a brother of Judas, perished.

Béton. French term for concrete. Much used in permanent fortifications. See **CONCRETE.**

Béton Aggloméré. A species of concrete invented by M. Coignet. Used in building arches, aqueducts, cellar walls, etc. It differs from ordinary béton, having much greater strength and hardness,—qualities derived from the ramming to which it is subjected.

Betray. To deliver perfidiously any place or body of troops into the hands of the enemy. To discover that which has been intrusted to secrecy.

Betty. A machine used for forcing open gates or doors. See **PETARD.**

BEY. See **BEG.**

Beyroot, or Beyrout (anc. *Berytus*). A seaport of Syria, colonized from Sidon; alternately possessed by the Christians and

Saracens; and after many changes, fell into the power of Amurath IV., since when it remained with the Ottoman empire up to the revolt of Ibrahim Pasha in 1832. The total defeat of the Egyptian army by the allied British, Turkish, and Austrian forces, and evacuation of Beyroot (the Egyptians losing 7000 in killed, wounded, and prisoners, and 20 pieces of cannon), took place October 10, 1840. Sir C. Napier was the English admiral engaged. Beyroot suffered greatly in consequence of the massacres in Syria in May, 1860.

Béziers. A city of France, department of Hérault; sacked by the Vandals in the 5th century; by the Visigoths in the 6th, 6th, and 7th centuries; by the Saracens in 720; by Charles Martel in 787; in 1209, this city was taken by the Catholics under Simon de Montfort and Arnaud, abbé of Cîteaux, and was the scene of a barbarous massacre of the Albigenses; 60,000 inhabitants were slain without consideration of sex or age (7000 were found dead in the church *de la Magdeleine*, where they sought refuge from their relentless slayers).

Bhootan. A country north of Lower Bengal. Invaded by the British in December, 1864, in consequence of injurious treatment of an envoy.

Bhurtpoor (India). Capital of Bhurtpoor, was besieged by the British, January 8, 1805, and attacked five times up to March 21, without success. The fortress was taken by Gen. Lake, after a desperate engagement with Holkar, the Mahratta chief, April 2, 1805; this led to a treaty on April 17. On the rajah's death, during a revolt against his son, Bhurtpoor was taken by storm, by Lord Colbourn, January 18, 1826.

Biacolytes. A military organization in the Grecian empire, whose duty was to prevent the committal of any excesses against life or property. Their service was analogous to that of the French gendarmes.

Biagrasso, or Abbiategrasso. A city on the Ticinella, in Lombardy; here, in 1524, the French were defeated by the Imperialists.

Bibans, or Bibens. "The Gates of Iron." A dangerous defile of the Atlas Mountains, between Algiers and Constantine; it is traversed by a number of currents. The French, led by the Duke of Orleans and Marshal Valée, passed through it in 1839.

Bibaux, or Petaux (Fr.). In ancient times, were soldiers who fought on foot, with cross-bow and lance.

Biberach (Würtemberg). Here Moreau twice defeated the Austrians,—under Latour, October 2, 1796, and under Kray, May 9, 1800.

Bicker. A word formerly used in the sense of to skirmish; to fight off and on; to make repeated attacks.

Bicocca (Northern Italy). Lautrec and the French were here defeated by Colonna and the Imperialists, April 29, 1522, and Francis thereby lost his conquests in Milan.

Bicoque (Fr.). A term used in France

to signify a place ill fortified and incapable of much defense. It is derived from a place on the road between Lodi and Milan, which was originally a gentleman's country-house surrounded by ditches. In 1522, a body of Imperial troops were stationed in it, and stood the attack of the whole French army, during the reign of Francis I. This engagement was called the battle of Bicoque.

Bicorneurs (Fr.). Name given to the militia of Valenciennes.

Bidarkee. A skin boat used by the Aleuts.

Bidassoa. A river of the Pyrenees, which forms one of the boundaries of France and Spain, the passage of which is memorable as completing the endeavors of Lord Wellington to drive the French, under Marshal Soult, out of the Peninsula into France. In 1808, Marshal Junot crossed the Bidassoa with the armies of France to invade the Peninsula, and in 1813, Lord Wellington crossed it, after driving the French out of Spain.

Bidaute, or Bidaux (Fr.). An ancient French corps of infantry; according to some authorities they were armed with two javelins.

Bien-Hoa. A fortified seaport town of the French colony in Cochin China; it was taken from the Annamites by the French under Rear-Admiral Bonard, December 15, 1861.

Bienne. A town of Switzerland; it was captured and burned by the bishop of Basel in 1867.

Biga. A Roman term applied in ancient times to vehicles drawn by two horses abreast, and commonly to the Roman chariot used in processions or in the circus. In shape it resembled the Greek war-chariot, —a short body on two wheels, low, and open behind, where the charioteer entered, but higher and closed in front.

Big Bethel. A village of York Co., Va., near Back River, about 12 miles northwest of Fortress Monroe, on the road from Hampton to Yorktown, and about 3 miles beyond Little Bethel, on the same road. In June, 1861, the main body of the Confederate army, under Gen. Magruder, being in the vicinity of Yorktown, an outpost of considerable strength was established at Little Bethel, which Gen. Butler, who was in command at Fortress Monroe, determined to dislodge. Accordingly, on the night of June 9, two New York regiments were ordered to gain the rear of the enemy's position, while a battalion of Vermont and Massachusetts troops and a New York regiment were to attack in front at break of day. Before daybreak, through some error, these forces approached and fired into each other, and thus betrayed their projected movements to the enemy, who retreated to Big Bethel, where there was another outpost, with works of some strength in process of erection. Gen. Pierce, who was in command of the Federal expedition, deter-

mined to carry these works. An attack was ordered, and after nearly three hours' fighting, the Federals being exposed to a heavy fire, while the Confederates were almost entirely protected, Gen. Pierce determined to retreat, which he did in good order, the enemy falling back the same day to Yorktown. The number of Federal troops was between 3000 and 4000, while that of the enemy was nearly 1500. The Federal loss was about 60, that of the Confederates was small in comparison.

Big Horn. A navigable river of the United States, near Fremont's Peak, in the Rocky Mountains. It has a northeast course of about 400 miles, being the longest affluent of the Yellowstone, which, again, is the largest affluent of the Missouri. A desperate battle was fought on the Little Big Horn, between the 7th U. S. Cavalry and the Sioux Indians, June 25, 1876.

Bigles. A military corps of Rome, whose particular duty was to furnish sentinels; the bread which these troops received was called *biglaticum*.

Bihach, or Bichacz. One of the strongest fortress-towns of Croatia, European Turkey; it has been the scene of frequent contests during the Turkish wars.

Bilbo. A rapier, a sword; so named, it is said, from *Bilboa*, in Spain, where the best are made.

Bilboa, or Bilbao (Northeast Spain). Founded about 1800; taken by the French in 1795; captured and recaptured during the invasion of the French in 1808; delivered from the Carlists by Espartero, aided by the British, December 24, 1836.

Bilboquet. A small 8-inch mortar, whose bore is only half a caliber in length. It throws a shell of 60 pounds about 400 toises.

Bill. A weapon much used by infantry, in the 14th and 15th centuries, for defense against cavalry, consisting of a broad, hook-shaped blade, having a short pike at the back and another at the summit, and attached to the end of a long staff.

Billet (Fr. *Billet de logement*). In England, is a ticket for quartering soldiers on publicans and others, which entitles each soldier, by act of Parliament, to candles, vinegar, and salt, with the use of fire and the necessary utensils for dressing and eating his meat. In the United States, no soldier shall, in time of peace, be quartered in any house without the consent of the owner, nor in time of war, but in the manner to be prescribed by law (Art. 3, Amendments to the Constitution of the United States).

Bill-hook. A small hatchet used in European armies in cutting wood for fascines and other military purposes. The pioneers of the infantry are always provided with them, and a sufficient supply is issued to regiments engaged on active service.

Binche. A town in the province of Hai-

naut, Belgium. The French drove the Austrians out of this place in 1794.

Bipennis. A double-headed axe, the weapon which, according to ancient historians and authors, particularly distinguished those fabulous female warriors, the Amazons.

Biporus. With the ancients this word signified a double-prowed boat, so that it could change its course to the opposite direction without turning.

Bir, or Birdjek. A walled town of Asiatic Turkey, on the Euphrates, which was ruined by Tamerlane.

Birse. A small river in Switzerland, on the banks of which, on August 26, 1444, 1500 Swiss fought an army of about 20,000 men, commanded by the dauphin of France, afterwards Louis XI. There were but 11 of the Swiss who survived the day, while their enemy left 8000 men and 1100 horses on the battle-field. On the same river 6000 confederate Swiss gained a splendid victory over 15,000 Austrians, July 22, 1499.

Birtha. See TEKRI.

Biscaïen (Fr.). A name formerly given to a long-barreled musket, the range of which was greater than the ordinary musket. Now this appellation is given to a leaden ball about the size of an egg, which is used for canister or case-shot.

Bisceglia. A fortified seaport town of Naples, on the Adriatic, 21 miles northwest of Bari. Here a celebrated combat took place between 18 Spaniards and the same number of French. Among the latter was the Chevalier Bayard.

Biskara, or Biskra. A town of Algeria, on the Kantara, taken by the French, March 8, 1844.

Bistriz. A fortified town of Transylvania, situated on the Bistriz River. Forming, as it does, the last strong position in the northeast of Transylvania, it was repeatedly, during 1848-49, the scene of hot strife between the Hungarian and Austrian generals.

Bitche. A town of France, in the department of the Moselle, in a wild and wooded pass of the Vosges. The Prussians, under Colonel Count von Wartensleben, attempted to surprise it in 1793, but failed.

Bithynia. An ancient division of Asia Minor, separated from Europe by the Propontus (Sea of Marmora) and the Thracian Bosphorus (Strait of Constantinople). It contained the famous Greek cities or colonies of Chalcedon, Heraclea, etc., and at later periods, Nicomedia, Nicaea, and Prusa. The inhabitants were supposed to be of Thracian origin. The country is said to have been subdued by Croesus of Lydia (560 B.C.), and five years later fell under the Persian dominion. About 440 or 430 B.C. it became an independent kingdom, under a dynasty of native princes, who made Nicomedia their capital. It afterwards fell into the hands of the Romans, and was governed as a province. In 1298, Osman the Turk broke into the country, and in 1328

Prusa, or Brusa, then its chief town, became the capital of the kingdom of the Osmanli.

Bitonto. A town of Naples where Mortemar and the Spaniards defeated the Germans, on May 26, 1784, and eventually gained the kingdom of the Two Sicilies for Don Carlos.

Biturritæ (now *Bedarrides*). In the department of Vaucluse, France. It was a city of the Allobroges, who were totally defeated in its environs by Domitius Ahenobarbus in 122 B.C.

Bivouac. A night-watch in open air. Troops bivouac when they make the best of it for the night, encamping in the open air. The term was also applied to a night-guard of the whole army, when apprehensive of surprise. The word comes from the German *bei*, "near," and *wache*, "watch." In recent times it is common for soldiers on the march to use the *tente d'abri*, or shelter-tent.

Bizerta, or Benzerta. The most northern town of Africa, and a fortified seaport of Tunis. It is defended by two castles, which, however, are commanded by adjacent heights. Though its port now only admits small vessels, it was formerly one of the best in the Mediterranean. This city was noted for the piracy of its inhabitants.

Black. In blazonry, sable denotes constancy, wisdom, and prudence.

Black-book. An ancient book of English admiralty law, compiled in the reign of Edward III. It has always been deemed of the highest authority in matters concerning the admiralty in England.

Blackfeet. A once powerful and ferocious tribe of American Indians of Algonkin stock, who infest the country between the Yellowstone and Missouri Rivers, and are also found in British America. See INDIANS AND THEIR AGENCIES.

Blackheath (Kent, near London). Here Wat Tyler and his followers assembled, June 12, 1381, and here also Jack Cade and his 20,000 Kentish men encamped, June 1, 1450. Here the Cornish rebels were defeated and Flannock's insurrection quelled, June 22, 1497. The cavern on the ascent to Blackheath, the retreat of Cade and the haunt of banditti in the time of Cromwell, was rediscovered in 1780.

Black Hole. The appellation familiarly given in England to the dungeon or dark cell of a prison. The name is associated with a horrible catastrophe in the history of British India, namely, the cruel confinement of a party of English in an apartment called the "Black Hole of Calcutta," on the night of June 19, 1756. The garrison of a fort at Calcutta having been captured by the nabob Surajah Dowlah, he caused the whole of the prisoners taken, 146 in number, to be confined in an apartment 20 feet square, having only two small windows, which were obstructed by a veranda. After a night of excruciating agony from heat, thirst, and want of air, there remained in the morning but 23 survivors.

Black Rod, Usher of the. An officer of the English House of Lords, whose emblem of authority is the wand or rod, with a gold lion on top. He belongs to the order of the Garter, and keeps the door when the chapter of that order is in session. His principal duty is to summon the Commons to the House of Lords when royal assent is given to bills, etc., and to take into custody any peer guilty of breach of privilege.

Black Sea, or Euxine. *Pontus Euxinus* of the ancients; a large internal sea between the southwest provinces of Russia and Asia Minor, connected with the Sea of Azov by the Straits of Yenikalé and with the Sea of Marmora by the Bosphorus. This sea was much frequented by the Greeks and Italians till it was closed to all nations by the Turks after the fall of Constantinople, in 1453. The Russians obtained admission by the treaty of Kainavdji, July 10, 1774. In 1779 it was partially opened to British and other traders, since which time the Russians gradually obtained the preponderance. It was entered by the British and French fleets, January 3, 1854. A dreadful storm in this sea raged from November 18 to 16, 1854, and caused great loss of life and shipping, and valuable stores for the allied armies. By the treaty of 1856 the Black Sea was opened to the commerce of all nations, the Russians and Turks not being allowed to keep ships of war on it. In 1871 the Russians were again permitted to have men-of-war on this sea.

Black Watch. Armed companies of the loyal clans (Campbells, Munros, etc.) employed to watch the Highlands from about 1725 to 1739, when they were formed into the celebrated 42d Regiment, which was formerly enrolled "The Royal Highland Black Watch." Their removal probably facilitated the outbreak of 1745. They wore dark tartans, and hence their name.

Blackwater, Battle of. In Ireland, August 14, 1698, when the Irish chief O'Neal defeated the English under Sir Henry Baginall. Pope Clement VIII. sent O'Neal a consecrated plume, and granted to his followers the same indulgences as to Crusaders.

Bladensburg. A village of Prince George Co., Md., memorable for the battle which was fought here August 24, 1814, between the British and Americans, and which resulted in the capture of Washington.

Blair-Athol. A village in Perthshire, Scotland; it was occupied by the Marquis of Montrose in 1644; stormed by a party under the command of one of Cromwell's officers in 1653; and gallantly defended by Sir Andrew Agnew, in 1746, when besieged by a portion of the Highland army, until he was relieved by the Hessians under the Earl of Crawford. The pass of Killecrankie, about two miles from Blair Castle, is famous for the battle which was there fought in 1689, between the Highlanders under Viscount Dundee, and King William's troops under Gen. Mackay.

Blaise. A military order instituted by the kings of Armenia, in honor of St. Blaise the Martyr, anciently bishop of Sebasta, and the patron saint of Armenia. Justinian calls them Knights of St. Blaise and St. Mary, and places them not only in Armenia, but in Palestine. They made a vow to defend the Church of Rome, and followed the rule of St. Basil. This institution appears to have commenced about the same time with the Knights Templar and Hospitallers.

Blakely Gun. See **ORDNANCE, BUILT-UP GUNS.**

Blakely Projectiles. See **PROJECTILE.**

Blamont. A small town of France, department of Doubs. This small place was protected by an ancient fortress, which was ruined by the allies in 1814.

Blanch-Lyon. A title of one of the English pursuivants-at-arms. See **PURSUIVANT.**

Blank. The point of a target at which aim is taken, marked with a white spot; hence, the object to which anything is directed.

Blank Cartridge. See **CARTRIDGE.**

Blanket-boats. A practical and highly useful plan for crossing streams is by means of boats constructed of a single rubber blanket, capable of carrying a soldier, knapsack, arms, and accoutrements, with only 4 inches of displacement. The size of some of the ordinary blankets is 6 feet long and 4 feet 9 inches wide; but 7 feet by 5 feet would be preferable. If the height of the boat be made 1 foot, the length will be 4 feet, and the width 2 feet 9 inches, so as to be completely covered by the blanket. The frame may be made of round sticks, 1 inch and $\frac{1}{4}$ inch in diameter, in the following manner:

For the bottom the two end-sticks are 2 feet 9 inches long, and the side-pieces 3 feet 9 inches long. They are connected by boring a $\frac{1}{4}$ -inch hole through the end-pieces, and into the ends of the side-pieces, into which pins are driven. The top is formed in the same manner, and both top and bottom of $\frac{1}{4}$ -inch sticks. The side-pieces of the bottom, and the top and bottom frames are connected by 1-inch round sticks inserted in $\frac{1}{4}$ -inch holes, in the same manner as the upright pieces are fastened in a chair. To keep the frame from falling apart, loops of cord are passed from top to bottom, and from side to side, and twisted with a stick. The rubber blanket is then spread upon the ground, the frame placed upon it, the sides and eyes turned up and lashed to the top rail by twine passed through the eyelets. Loops of cord are passed over these projecting ends, and twisted with a stick, which binds the parts together. One of these boats having a horizontal area of 11 square feet, would require 687 pounds to sink it 1 foot, and the average weight of a man would displace less than 4 inches.

In using these blanket-boats it will be

convenient to lash several together, side by side, upon which soldiers can be transported. The float can be paddled, or a rope may be stretched across, supported by floats, and the men can pull themselves across. If used for cavalry, some of the men can hold the bridles of the horses, while the others can pull, paddle, or pole across the stream, the saddles being placed in the boats. The frames are abandoned, or used for fuel, when the army has crossed over.

Several of these boats lashed together, and covered with poles, would form a raft on which wagons could be carried over; but for artillery, rafts of wagon-bodies, or something possessing greater powers of flotation, should be employed. The bill of materials for the frame of a blanket-boat is: 4 end-pieces, $1\frac{1}{2}$ inches round or square, 2 feet 9 inches long; 4 side-pieces, $1\frac{1}{2}$ inches round or square, 3 feet 9 inches long; 30 uprights, 1 inch round or square, 1 foot long; 10 pieces across bottom, 1 inch round or square, 2 feet 9 inches long; 8 double pins, $\frac{1}{4}$ -inch in diameter, 3 inches long; 4 pieces of cord or strong twine, each 9 feet long; 6 pieces of cord or strong twine, each 8 feet long; 1 india-rubber blanket, 6 feet long, 4 feet 9 inches wide, with eyelet holes around all sides, not more than 6 inches apart, and 30 feet of twine to lash the blanket to the frame.

Blanketeers. A number of operators who, on March 30, 1817, met in St. Peter's Field, near Manchester, England, many of them having blankets, rugs, or great-coats rolled up and fastened to their backs. This was termed the "blanket meeting." They proceeded to march towards London, but were dispersed by the magistracy. It is stated that their object was to commence a general insurrection. Eventually the ring-leaders had an interview with the cabinet ministers, and a better understanding between the working-classes and the government ensued.

Blasting. The displacement of earth or rock by the use of an explosive. One of the most important parts of the art of mining in its various branches of *tunneling, shaft-boring, well-digging, submarine mining*, etc. The explosive is ordinarily placed in a bore hole, but in submarine mining this is sometimes dispensed with when a high explosive like nitro-glycerine is used.

Blasting Powder. An explosive in the form of powder used for blasting. The most powerful blasting powders in common use are made by adding certain substances to nitro-glycerine, which, by absorbing it, reduce it to the form of powder, and thus render it comparatively safe against the shocks and jars of use. (See **GIANT POWDER, DYNAMITE.**) The term blasting powder is also specially applied to a powder analogous to gunpowder, but which contains sodium nitrate in place of potassium nitrate, or salt-petre.

Blaubeuren. A town of Würtemberg, on the Blau; here the French defeated the

Austrians in 1800; the fortress was razed in 1806.

Blayle (anc. *Blavia*). A fortified seaport of France, in the department of Gironde, 20 miles north-northwest of Bordeaux. The Duchess de Berry was imprisoned in the citadel in 1833. This city was captured by the French, from the English, in 1839; the Protestants took possession of it in 1668, and the English tried in vain to take it in 1814.

Blazonry (from the German *Blasen*, "to blow"). The art of describing in technical language the objects or charges borne in a coat of arms, and the manner of arranging them on a shield. The term originated from the custom of blowing a trumpet to announce the arrival of a knight, or his entrance into the lists at a joust or tournament. The blast was answered by the heralds, who described aloud and explained the arms borne by the knight.

Blechstreifen, or **Blechschiene** (*Ger.*) (*Les laisches*, *Fr.*). Thin metal plates which the ancient Gauls placed upon the buff coats of infantry; they were placed between the buff and the lining.

Bleneau. A village of France, in the department of the Yonne, about 29 miles west-southwest of Auxerre, celebrated as the place where Turenne gained a victory over the Prince of Condé in 1652.

Blenheim (*Ger. Blindheim*). A village of Bavaria, 23 miles north-northwest of Augsburg, memorable in connection with Marlborough's great victory over the French and Bavarians, August 13, 1704. The battle, though known in English history by the name of "Blenheim," did not occur here, but at the neighboring village of Höchstädt, by which name it is known to the French and Germans. The French and Bavarian army consisted of 56,000 men, commanded by Tallard, Marsin, and the Elector of Bavaria, and opposed to it was the allied army 52,000 strong, commanded by the Duke of Marlborough and Prince Eugene. The loss of the French and Bavarians was estimated at from 30,000 to 40,000. Near here, also, in 1800, the French defeated the Austrians.

Bleus, **Les** (i.e. "The Blues"). A name given to the soldiers of the Republic, by the Royalists, during the wars of La Vendée, on account of their uniform.

Blidah. A considerable town of Algeria, on the border of the Metidjah Plain; taken by the French in 1830, and permanently occupied by them since 1838.

Blieskastel. A small town of Rhenish Bavaria; near here, on November 19, 1798, 7000 Prussians and Saxons under Gen. Kalkreuth fought the French, about 20,000 strong, under Gen. Hoche, neither side gaining the victory. The Prussians held their ground without any great loss until dark, when, deeming their position untenable, they evacuated it during the night.

Blindage. A temporary bomb-proof or splinter-proof roofing, constructed of timber

and the like, to give cover to magazines, batteries, hospitals, etc. See **BLINDS**.

Blinds. In military affairs, are wooden frames, composed of four pieces, either flat or round, two of which are 6 feet long, and the others 8 or 4 feet, which serve as spars to fasten the two first together: the longest are pointed at both ends, and the two others are fastened towards the extremities of the former, at about 10 or 12 inches. Their use is to fix them either upright, or in a vertical position against the sides of the trenches or sap, to sustain the earth. Their points at the bottom serve to fix them in the earth, and those at the top to hold the fascines that are placed upon them; so that the sap or trench is formed into a kind of covered gallery, to secure the troops from stones and grenades.

Blind-shell. A shell, the bursting charge of which is exploded by the heat of impact. Used in modern ordnance against armor.

Blistered Steel. See **ORDNANCE**, **METALS** **FOR**.

Block. See **IMPLEMENTS**.

Blockade. In military art, is an operation for capturing an enemy's town or fortress without a bombardment or regular siege. The attacking party throws up works on the neighboring heights and roads, and part of the besieging force remains under cover in villages, or in a temporary camp, ready to repel any sortie attempted by the besieged. The whole purpose in view is to prevent the besieged from receiving supplies of any kind, in order that, when food or ammunition is exhausted, they may be compelled to surrender. Fortresses situated on steep and rocky eminences, difficult to conquer by bombardment or assault, may often be reduced by blockade, because the roads or paths for the reception of supplies are few, and can be guarded by a small number of troops.

Blockade. In international law, is the means in time of war of rendering intercourse with an enemy's port unlawful on the part of neutrals; and it is carried into effect by an armed force (ships of war), which blocks up and bars export or import to or from the place blockaded. To be valid, a blockade must be accompanied by actual investment of the place, and it may be more or less rigorous, either for the purpose of watching the operations of the enemy, or to cut off all excess of neutral vessels to that interdicted place. To be binding on neutrals, it ought to be shown that they have knowledge, or may be presumed to know of the blockade, for which reason a formal notification of the fact is usually made by the blockading power. The breach of blockade, which may be effected by coming out of a blockaded port, or going in, subjects the property so employed to confiscation. On the proclamation of peace, or from any political or belligerent cause, the continuance of the investment may cease to be necessary, and the blockade is then said to be *raised*. The blockading

force then retires, and the port is open as before to all other nations. In the present century recourse has been had to this means of cutting off supplies from the enemy on several occasions. The Elbe was blockaded by Great Britain, 1808; the Baltic, by Denmark, 1848-49 and 1864; the Gulf of Finland by the allies, 1864; and the ports of the Southern States by President Lincoln, April 19, 1861.

Blockader. One who blockades.

Block Battery. In gunnery, a wooden battery for two or more small pieces, mounted on wheels, and movable from place to place; very ready to fire *en barbette*, in the galleries and casements, etc., where room is wanted.

Block-house. An edifice or structure of heavy timber or logs for military defense, having its sides loop-holed for musketry, and often an upper story projecting over the lower, or placed upon it diagonally, with projecting corners, to facilitate a firing downward, and in all directions; the sides and ends are sometimes much like a stockade, and the top covered with earth; there may also be a ditch around it. Formerly much used in Germany and America, and used extensively in the United States as a defense against Indians, and during the civil war, 1861-65, for the protection of important places on railroads, such as bridges, etc. If exposed to the fire of artillery, block-houses should be formed of double rows of logs 8 feet apart, with well-rammed earth between them.

Bloodhound. A name given to certain species of the dog, distinguished for their keenness of scent, and the persistency with which they follow the track of game. They have been frequently employed during wars to track partisans, and even in the American civil war, 1861-65, were employed by the Confederates to track Union prisoners who escaped from their prisons. In time of peace they are sometimes employed to hunt felons, fugitive slaves, etc. When they are thus employed they acquire a peculiarly bloodthirsty and ferocious character.

Blorheath. In Staffordshire, England; here on September 23, 1459, the Earl of Salisbury and the Yorkists defeated the Lancastrians, whose leader, Lord Audley, was slain with many Cheshire gentlemen. A cross commemorates this conflict.

Bludgeon. A short stick, with one end loaded, or thicker and heavier than the other, used as an offensive weapon.

Blue-light. A composition, burning with a blue flame, used as a night signal in ships, or for military purposes. See PYROTECHNY.

Blunderbuss. A short gun or fire-arm, with a large bore, capable of holding a number of balls, and intended to do execution without exact aim.

Blyde, Bly, or Blude (Ger.). A kind of a war machine which was used in ancient times to throw stones; some authors com-

pare it to the catapult. In the year 1585, at the siege of the castle of Rucklingen, Albert, duke of Saxony and Lüneburg, was killed by a stone thrown by a blyde.

Board of Officers. A number of officers assembled by military authority for the transaction of business.

Board of Ordnance. A government department, which formerly had the management of all affairs relating to the artillery and engineering corps of the British army. This board was abolished after the Crimean war.

Board, Pointing. In gunnery, this is a piece of wood 1 foot long, 2 or 3 inches wide, and 1 inch thick, having a notch cut in the middle of one side to fit on the stake, and graduated into equal divisions from its middle. When not in use the pointing cord may be wound on it. This board is used for directing mortars.

Boards of Examination. In the army, are instituted to determine upon appointments in regiments, and for appointments and promotion in the medical staff, engineer corps, and ordnance department. They are composed of army officers.

Boards of Survey. In the army, are convened for the purpose of fixing the responsibility for public property lost, damaged, or destroyed, of ascertaining what articles of public property may have been lost or abstracted whenever a soldier deserts, and of taking an inventory of the public property in charge of a deceased officer.

Boats, Blanket-. See BLANKET-BOATS.

Bobruisk. A fortified town of Russia, in the government of Minsk. It is situated on the right bank of the Beresina, and is a station for the steam-packets navigating the Dnieper and Beresina. It was besieged ineffectually by the French in 1812.

Boccacci. The Italians have a peculiar kind of fire-arm which they call by this name; it is enlarged towards the muzzle in the shape of a trumpet. This gun is principally used by the Calabrians.

Bocchetta. A celebrated pass of the Apennines, the key of the route from Novi to Genoa. Redoubts were constructed here by the Imperialists in 1746 for the defense of the pass. The French traversed this pass when they entered Italy in 1796.

Bodegraven. A fortified town of Holland. On November 28, 1872, it was captured by the Duke of Luxembourg, who tarnished his victory by authorizing the town to be pillaged.

Bodkin. A dirk or dagger; a word still in use, though Johnson says it is the oldest acceptance of it.

Body. In the nomenclature of modern ordnance, is the part of the piece in rear of the trunnions.

Body. In the art of war, is a number of forces, horse or foot, united and marching under one commander. *Main body of an army*, sometimes means the troops encamped in the centre between the two wings, and

generally consists of infantry. The main body on a march, signifies the whole of the army exclusive of the van- and rear-guards.

Body of the Place. The *enceinte* of a fortress, or main line of bastions and curtains, as distinguished from outworks.

Body-guard. A guard to protect or defend the person; a life-guard.

Bœotia. One of the political divisions of ancient Greece, lying between Attica and Megaris on the south, and Locris and Phocis on the north, and bounded on the other side by the Eubœan Sea and the Corinthian Gulf. The tribes of greatest importance who appear as rulers of Bœotia in the heroic age were the Minyæ and the Cadmeans, or Cadmeones,—the former dwelling at Orchomenus, and the latter at Thebes. About 60 years after the Trojan war the Bœotians, an Æolian people who had hitherto dwelt in Thessaly, having been expelled from that country, took possession of the land then called Cadmeis, to which they gave their own name of Bœotia. At the commencement of the historic period all the ancient tribes had disappeared, and all the cities were inhabited by Bœotians, the most important forming a political confederacy under the presidency of Thebes. After the battle of Chæronea (338 B.C.) and the destruction of Thebes by Alexander three years after, Bœotia rapidly declined, and so low had it sunk in the time of the Romans, that of all its great cities there remained only two, which had dwindled into insignificant towns; of the other great cities nothing remained but their ruins and their names. The people are represented as a dull and heavy race, with little susceptibility and appreciation of intellectual pleasures.

Bohain. A small town of France, in the department of Aisne, which fell into the hands of the Imperialists in 1537, and was recaptured a short time afterwards.

Bohemia. A political and administrative division of the Austrian empire, bounded on the north by Saxony and Prussian Silesia, east by Prussia and Moravia, south by Lower Austria, and west by Bavaria. It derives its name from the Boii, a Celtic people who settled in the country about 600 B.C., and who were expelled by the Marcomanni in the time of Augustus. About the middle of the 6th century a numerous army of Czechs entered the country and subdued it. In 1310 the crown came to the house of Luxemburg, when Charles IV. united Bohemia with the German empire. After many vicissitudes it fell to the house of Austria in the person of the Archduke Ferdinand, brother of Charles V., and brother-in-law of Louis II., king of Hungary and Bohemia, who was killed in battle with the Turks near Mohacs, in 1526. In 1619 the Bohemians revolted against the house of Austria, and offered the crown to Frederick V., elector palatine, but Frederick was defeated at the battle of White Mountain in November, 1620, and the country has ever

since remained under the sway of the emperors of Austria.

Bohmisch-Brod. A small town of Bohemia. Here the emperor Sigismund defeated the Hussites in 1434.

Boii. An ancient Celtic people who emigrated into Italy, where they waged war for several centuries against the Romans. They were defeated at the Vadimonian Lake, 288 B.C. They were finally subdued by Scipio Nasica, 191 B.C., and expelled from Italy. A portion of them founded the kingdom of Bolothemum (Bohemia), from which they were expelled by the Marcomanni in the time of Augustus.

Bois-le-Duc. A fortified city of Holland, capital of North Brabant; besieged and captured by the Dutch in 1629, and by the French in 1794; surrendered to the Prussian army, under Bulow, in January, 1814.

Bojano. A town in the province of Molise, Naples. The site of Bojano has been identified as that of the famous Samnite city of *Bovianum*, which played so conspicuous a part in the Samnite, Punic, and Social wars. Unsuccessfully besieged by the Romans in 314 B.C., it was taken by them in 311 B.C., and yielded immense spoils. Passing out of their hands, it was retaken by them in 305 B.C., and once more reverting to its original owners, was a third time captured by the Romans in 298 B.C. During the second Punic war it formed the headquarters of the Roman army on more than one occasion. In the great Social war the confederates made it their capital. It was surprised by Sulla, and retaken by the Marsic general, Pompeius Silo. Cæsar established a military colony, and it afterwards thrived under the Roman empire.

Bojeleschti. A village of Wallachia, where, in 1828, the Russians under Gen. von Geismar defeated the Turks, although the latter were superior in force. The Russians captured 7 guns, 24 ammunition- and 400 bread-wagons, 24 colors, and guns enough to arm 10,000 men. The Cossacks took 507 prisoners.

Bokhara. The ancient *Sogdiana*, a state of Central Asia in Independent Toorkistan. It was conquered by the Turks in the 6th century, by the Chinese in the 7th, and by the Arabs about 705. After many changes of masters it was subdued by the Uzbek Tartars, 1505. The British envoys, Col. Stoddart and Capt. Conolly, were murdered at Bokhara, the capital, by the khan in 1843. In the war with Russia, beginning in 1866, the emir's army was defeated several times in May and subsequent months during that year. Peace was made July 11, 1867. The Russians were again victors, May 25, 1868, and occupied Samarcand the next day. Further conquests were made by the Russians, and Samarcand was secured by treaty November, 1868.

Bolade (Fr.). A weapon of the shape of a mace.

Bologna. The ancient *Felsina*, afterwards

Bononia. A distinguished city of Italy, capital of the province of the same name; besieged and taken by Pope Julius II., 1506; taken by the French, 1796; by the Austrians, 1799; again by the French after the battle of Marengo, in 1800; restored to the Pope in 1815; a revolt suppressed by Austrian interference, 1831; rebellion in 1848; taken by the Austrians, May, 1849; provisional government formed June 15, 1859; Victor Emmanuel entered Bologna as sovereign, May 2, 1860.

Bolster. A block of wood on the carriage of a siege-gun, and on the mortar-wagon upon which the gun rests when moving it from place to place. The first is a *breach-*, the second a *muzzle-bolster*.

Bolster. A cushioned or padded part of a saddle.

Bolt. A pointed shaft or missile intended to be shot from a cross-bow or catapult; an arrow; a dart.

Bolt. See ORDNANCE, CARRIAGES FOR, NOMENCLATURE OF ARTILLERY CARRIAGE.

Bolt, Palliser. A screw-bolt for securing armor plates. The end upon which the screw-thread is cut is larger than the shank.

Bomarsund. A strong fortress on one of the Aland isles in the Baltic Sea, taken by Sir Charles Napier, commander of the Baltic expedition, aided by the French military contingent under Gen. Baraguay d'Hilliers, August 16, 1854. The governor Bodisco and the garrison, about 2000 men, became prisoners, and the fortifications were destroyed.

Bomb. A hollow ball or shell of cast iron filled with explosive materials, and furnished with a fuze, which being ignited when the missile is discharged from a mortar or howitzer, burns during its flight, and causes it to explode with destructive violence when it falls. They are now commonly called shells.

Bombard. An ancient piece of ordnance, very short, thick, and wide at the bore. Some of the bombards used in the 15th century propelled stones weighing from 200 to 500 pounds each.

Bombard. To assault a town or fortress by projecting into it shells, etc., from mortars, in order to set fire to and destroy the houses, magazines, and other buildings.

Bombardelle (Fr.). A small bombard which was used in ancient times. In 1830, one was disintegrated near Laon, France; it is the opinion of some that this bombardelle was manufactured during the reign of Charles VII., from 1436-40.

Bombardier. Is an artilleryman versed in that department of arms which relates especially to bombs and shells, mortars and howitzers, grenades and fuzes. In some foreign armies, the bombardiers form a separate corps. In the British service a bombardier is a non-commissioned grade in the artillery below that of corporal.

Bombardment. Is an attack upon a fortress or fortified town by means of shells, red-

hot shot, carcasses, rockets, etc., to burn and destroy the buildings, and kill the inhabitants, and by this means compel its surrender. A bombardment requires little engineering skill; whereas a regular siege requires the aid of engineers to direct the attack against fortifications, guns, and soldiery, leaving the inhabitants and buildings untouched. It is generally regarded by military engineers as a cruel operation, and in modern times is mostly adopted as an adjunct to a siege. The stores required for a vigorous bombardment are immense. Thus, in 1759, Rodney threw 20,000 shells and carcasses into Havre; in 1792, the Duke of Saxe Teschen threw 86,000 shot and shell into Lille in 140 hours; in 1795, Pichegru threw 8000 shells into Mannheim in 16 hours; and in 1807, the English threw 11,000 shot and shell into Copenhagen in three days. Of the bombardments recorded in history may be mentioned that of Algiers by Duquesne in 1682-83, by the Venetians in 1784, and by the English in 1816; of Genoa in 1684; of Tripoli in 1685, 1728, and 1747; of Barcelona in 1691; of Brussels in 1694; of Toulon by the English in 1707; of Prague in 1744, 1759, and 1848; the bombardment of Lille by the Austrians in 1792; of Le Quesnoy, Breda, Lille, Lyons, Maestricht, and Mayence in 1793; of Menin, Valenciennes, and Ostend in 1794; of Copenhagen by the English in 1807; of Glogau, Breslau, and Schweidnitz by the French in 1806-7; of Saragossa by the French in 1808; of Flushing by the English in 1809; of Antwerp in 1832; of St. Jean d'Ulloa by the French in 1838; of Beyrout and St. Jean d'Acre by the English in 1840; of Barcelona by Espartero in 1842; of Mogador by the French in 1844; and of Odessa by the English and French fleets in 1854. Vera Cruz was bombarded by Gen. Scott for three days before its surrender, March 27, 1847. During the civil war recourse was had several times to this method of reducing fortified places. Among the most noted were the bombardment by Admiral Farragut for six days, April 18, 1862, of Forts Jackson and St. Philip (after which they surrendered); the bombardment of Fort Pulaski, Ga., by Gen. Gillmore, in April, 1862; the first bombardment of Fort Sumter in August, 1863, which effectually disabled the fort for immediate defense of Charleston harbor, although the works remained in the possession of the Confederates; and the second bombardment, which took place in October following, leaving the place in ruins. During the Franco-German war Strasburg was bombarded by the Prussians on August 18, 1870, and after an immense number of shells were thrown into it with ruinous effect the city surrendered on September 27. During the siege of Paris it was estimated that for two weeks in January, 1871, about 500 shells a day were thrown into the city, to the great destruction of life and property.

Bomb-chest. A chest filled with bombs, or only with gunpowder, placed under

ground, to cause destruction by its explosion.

Bomb-proof. A term applied to military structures of such immense thickness and strength that bombs cannot penetrate them.

Bomb-shell. A hollow globe of iron, filled with powder, and thrown from a mortar; a bomb.

Bone, Bona, or Bonah. A fortified seaport town of Algeria, 85 miles northwest of Constantine; it is surrounded by a wall with square turrets which has four gates. Fort Cigogne is its chief defense; the French occupied this place in July, 1880.

Bonn. A town on the Rhine (the Roman Bonna) was in the electorate of Cologne; it has been frequently besieged, and was assigned to Prussia in 1814.

Bonnet. In fortification, is a small defense work constructed at salient angles of the glacis or larger works. It consists of two faces only, with a parapet 3 feet high by 10 or 12 feet broad. There is no ditch. A larger kind, with 3 salient angles, is called a *priest's bonnet*, or *bonnet à prêtre*. The use of the bonnet is to check the besiegers when they are attempting to make a lodgment.

Bonneval. A town of France, formerly fortified; it was partially destroyed by the English during the 15th century.

Bontchouk. A lance ornamented with a horse's tail. When the kings of Poland led their armies, bontchouks were carried before them.

Boomerang. A very singular missile weapon used by the natives of Australia. It is made of hard wood, usually from 20 to 30 inches in length, from 2 to 3 inches wide, and $\frac{1}{2}$ or $\frac{3}{4}$ of an inch thick. It is curved or bent in the middle at an angle of from 100° to 140°. When thrown from the hand with a quick rotary motion, it describes very remarkable curves, according to the shape of the instrument and the manner of throwing it, often moving nearly horizontally a long distance, then curving upward to a considerable height, and finally taking a retrograde direction, so as to fall near the place from which it was thrown, or even very far in the rear of it.

Booneville. A river-port, capital of Cooper Co., Mo., situated on the right bank of the Missouri River, 48 miles northwest of Jefferson City. During the civil war a Confederate force of about 2500 raw troops was here attacked by the Federals under Gen. Lyon, June 17, 1861. After a short conflict the Confederates were routed, abandoning their guns and camp equipage, which fell into the hands of the Union forces.

Boothauk. A fortified pass of Afghanistan, 12 miles to the east of Cabul. It runs for 5 miles between cliffs 500 feet high, and in some places only 50 yards wide.

Boots and Saddles. In cavalry tactics, a trumpet call which is the first signal for mounted drill, and for all other formations mounted; it is also the signal for the trumpeters to assemble.

Booty. Is the victors' share in property captured from the vanquished. It is generally a military term, the word *prize* being more frequently used in the navy.

Bordeaux, or Bourdeaux (Southwest France). This city was sacked by the Visigoths, who were driven from it by Clovis; it was ravaged by the Saracens and Normans in the 8th and 9th centuries. It came into the possession of the Duke of Gascoyne in 911; in 1658 the city rebelled, but was taken by the royal troops; Bordeaux was entered by the victorious British army after the battle of Orthes, fought February 27, 1814.

Bordure, or Border. In heraldry, coats of arms are frequently surrounded with a bordure, the object of which is to show that the bearer is a cadet of the house whose arms he carries. Its character often has reference to the profession of the bearer; thus a *bordure embattled* is granted to a soldier, and a *bordure ermine* to a lawyer.

Bore. Of a piece of ordnance includes all the part bored out, viz., the cylinder, the chamber (if there is one), and the conical or spherical surface connecting them.

Borghetto. A town of Italy, on the Mincio, 15 miles southwest of Verona; it has a castle and a vast fortified causeway. The French here defeated the Austrians in 1796.

Borgo Forte. A town of Italy, in Lombardy, on the Po, 7 miles south of Mantua. The Austrians were here defeated by the French in 1796.

Bori. A Turkish term for military trumpets.

Boring Cannon. See **ORDNANCE, CONSTRUCTION OF.**

Borissov. A town of Russia, on the left bank of the Berezina. A conflict took place here November 28, 1812, between the French and Russians; near this town, at the village of Studienka, the disastrous passage of Berezina was effected by the French army, November 26-27, 1812.

Bormann-fuze. A fuze which is used for spherical case-shot. The fuze-case is made of metal (a composition of lead and tin), and consists of a short cylinder, having at one end a horseshoe-shaped indentation, one end only of which communicates with the magazine of the fuze placed in the centre by a channel filled with *rifle* powder. This horseshoe indentation extends nearly to the other end of the cylinder, a thin layer of the metal only intervening. This is graduated on the outside into equal parts representing seconds and quarter-seconds. In the bottom of this channel a smooth layer of the composition is placed, with a piece of wick or yarn underneath it. On this is placed a piece of metal, the cross-section of which is wedge-shaped, and this, by machinery, is pressed down upon the composition, sealing it hermetically. The cylindrical opening is filled with musket powder and covered with a sheet of tin, which is soldered, closing the magazine from the external air. Before using the fuze several holes are punched

through this sheet of tin, to allow the flame to enter the shell. On the side of the fuze the thread of a screw is cut which fits into one cut on the inside of the fuze-hole, and the fuze is screwed into the shell with a wrench. The thin layer of metal over the composition is cut through with a gouge or chisel, or even a penknife, at the interval marked with the number of seconds which we wish the fuze to burn. To prevent the metal of this fuze, which is soft, from being driven into the shell by the explosive force of the charge, a circular piece of iron, with a hole through its centre, and the thread of a screw on the outside, is screwed into the fuze-hole before the fuze is inserted. The most important advantage of this fuze is, that the shells can be loaded, all ready for use, and remain so any length of time, perfectly safe from explosion, as the fuze can be screwed into its place, and the composition never exposed to external fire until the metal is cut through.

Borneo. An island in the Indian Ocean, the largest in the world except Australia; discovered by the Portuguese about 1520; the pirates of this island were several times chastised by the British government; incorporated with the British empire, December 2, 1846.

Bornhoevede. A village of Holstein, where a battle was fought on July 22, 1227, between Woldemar II., king of Denmark, and Adolphus IV. of Holstein; the Danes were totally defeated.

Borodino. A Russian village on the Moskwa, near which a sanguinary battle was fought, September 7, 1812, between the French under Napoleon, and the Russians under Kootsof, 240,000 men being engaged. Each party claimed the victory; but the Russians retreated, leaving Moscow, which the French entered September 14. The French name it the battle of Moskwa, and it gave Marshal Ney his title of Prince of Moskwa.

Boroughbridge. A town in Yorkshire, England, the site of a battle between the Earls of Hereford and Lancaster and Edward II., March 16, 1322. The latter at the head of 30,000 men pressed Lancaster so closely that he had not time to collect his troops together in sufficient force, and being defeated and made prisoner, was led, mounted on a lean horse, to an eminence near Pontefract, and beheaded by a Londoner.

Boscobel. Near Donington, Shropshire, England, where Charles II. concealed himself after his defeat at Worcester.

Bosnia. In European Turkey, formerly part of Pannonia, was governed by chiefs till a brother-in-law of Louis, king of Hungary, was made king, 1376. He was defeated by the Turks in 1389, and became their vassal. Bosnia was annexed to the Ottoman empire in 1622. Many efforts have been made by the Bosnians to recover their independence; they rebelled in 1849, and were subdued by Omar Pasha in 1851.

Bosniaken. Formerly light cavalry of the Prussians, resembling the present Uh-lans. Frederick I. formed this cavalry in 1745.

Bosphorus, or Bosporus, Thracian (now Strait of Constantinople). The ancient name of the strait which connects the Black Sea with the Sea of Marmora. Darius Hystaspes threw a bridge of boats over this strait when about to invade Greece, 493 B.C.

Bosporus. The country on both sides of the Bosphorus Cimmerius, or Strait of Yenikalé, formed in ancient times the kingdom of Bosporus. The Scythians conquered Bosporus, 285 B.C.; conquered by Mithridates VI., 80 B.C.; conquered by Cæsar, 47 B.C.; Polemon conquered Bosporus, 14 B.C. A list of obscure kings given by some writers ends with Sauromates VII., 344.

Boss. The apex of a shield.

Bosse, Bosse à Feu (Fr.). A term used in the French artillery to express a glass bottle which is very thin, contains 4 or 5 pounds of powder, and round the neck of which 4 or 5 matches are hung after it has been well corked. A cord 2 or 3 feet in length is tied to the bottle, which serves to throw it. The instant the bottle breaks the powder catches fire, and everything within the immediate effects of the explosion is destroyed.

Bostanji. The first Turkish foot-guards, about 12,000 strong; they guard the imperial castles and accompany the sultans to the field. They were originally employed as gardeners, guards for the seraglio, etc. Their number is now greatly reduced.

Boston. A city and capital of Massachusetts, situated on the west side of Massachusetts Bay, at the mouth of Charles River. It was built about 1627. Here originated that resistance to the British authorities which led to American independence. The act of Parliament laying duties on tea, papers, colors, etc. (passed June, 1767), so excited the indignation of the citizens of Boston, that they destroyed several hundred chests of tea, December 16, 1773. Boston seaport was shut by the English Parliament, until restitution should be made to the East India Company for the tea lost, March 25, 1774. The town was besieged by the British next year, and 400 houses were destroyed. A battle between the royalist and independent troops, in which the latter were defeated, took place June 17, 1775; the city was evacuated by the king's troops, April, 1776. The inhabitants were very zealous against slavery in 1861.

Boston Massacre. A name popularly given to a disturbance which occurred in the streets of Boston on the evening of March 5, 1770, when a sergeant's guard belonging to the British garrison fired upon a crowd of people who were surrounding them and pelting them with snowballs, and killed 8 men besides wounding several others. The leader of the townspeople was a black man named Crispus Attucks. The affair is

of historical importance, as it prepared the minds of men for the Revolutionary struggle which followed.

Bostra, or **Bozrah**. A city of Arabia, in an oasis of the Syrian Desert, 76 miles south of Damascus; it was besieged, captured, and sacked by the Saracens, who were commanded by Khaled.

Bosworth Field. In Leicestershire, England, the site of the thirteenth and last battle between the houses of York and Lancaster, August 22, 1485, when Richard III. was defeated and slain by the Earl of Richmond, afterwards Henry VII. Sir William Stanley at a critical moment changed sides, and thus caused the loss of the battle. It is said that Henry was crowned on the spot with the crown of Richard found in a hawthorn bush near the field.

Bothwell Bridge. In Lanarkshire, Scotland. The Scotch Covenanters, who took up arms against the intolerant government of Charles II., and defeated the celebrated Claverhouse at Drumclog, June 1, 1679, were totally routed at Bothwell Bridge, June 22, 1679, by the Earl of Monmouth, and many persons were tortured and executed.

Botoné, or **Bottony**. In heraldry, a *cross-botoné* is a cross of which the ends are in the form of buds or buttons.

Bottle Cartridge. See **CARTRIDGE**, **BOTTLE**.

Bottoming. The foundation of a road-bed.

Botzen, or **Bolzana** (anc. *Pons Drusi*). The capital of the circle of Etsch in Tyrol. This town was captured by the French in 1809.

Boucanier (*Fr.*). A long, heavy musket, used by the American buccaneers, and with such skill as to give the weapon a high degree of celebrity.

Bouchain. A small strongly fortified frontier town of France, in the department of the North; besieged and captured by Louis XIV. in 1673; by the Duke of Marlborough in 1711; retaken by the French in 1712, and ceded to France by the treaty of Utrecht.

Bouche (*Fr.*). Means the aperture or mouth of a piece of ordnance, that of a mortar, of the barrel of a musket, and of every species of fire-arms from which a ball or bullet is discharged.

Boufarik, or **Boufareek**. A place in Algeria where the French encountered the Arabs, October 2, 1832.

Bouge, or **Boulge** (*Fr.*). An ancient war-club, the head of which was loaded with lead, also called *plombée*.

Bougiah (anc. *Salvæ*). A seaport town of Algeria, which was captured by the French, October 19, 1833, and successfully defended against the Arabs, August 26, 1842.

Bouillon (Belgium). Formerly a duchy, was sold by Godfrey, its ruler, to Albert, bishop of Liège, to obtain funds for the crusade, 1095; it was seized by the French

in 1672, and held by them till 1815, when it was given to the king of the Netherlands, as duke of Luxemburg. It was awarded to Belgium after the revolution of 1830.

Boulaf. A kind of baton or very short mace, formerly used by the Polish generals.

Boulak, or **Boolak**. A town of Lower Egypt, on the right bank of the Nile; burned by the French in 1799; since rebuilt by Mohammed Ali.

Boulanger Chronograph. See **CHRONOSCOPES**.

Boulanger Telemeter. See **RANGE FINDERS**.

Boulevard (*Fr.*). An ancient bastion, bulwark, or rampart.

Boulogne. A seaport in Picardy, Northern France; was taken by the British under Henry VIII., September 14, 1544, but restored at the peace, 1550. Lord Nelson attacked this city, disabling 10 vessels and sinking 5, August 3, 1801; in another attempt he was repulsed with great loss. In 1804, Bonaparte assembled 160,000 men and 10,000 horses, and a flotilla of 1300 vessels and 17,000 sailors, to invade England; it is supposed that this French armament served merely for a demonstration, and that Bonaparte never seriously intended the invasion. Sir Sidney Smith unsuccessfully attempted to burn the flotilla with fire-machines called catamarans, October 2, 1804. Congreve rockets were used in another attack, and they set the town on fire, October 8, 1806. The army was removed on the breaking out of the war with Austria in 1805. Louis Napoleon, afterwards emperor, made a descent here with about 50 followers, August 6, 1840, without success.

Bounty. A premium offered or given to induce men to enlist into the public service.

Bourbon, *Isle of* (in the Indian Ocean). Discovered by the Portuguese about 1545. The French here formed a colony in 1653 (according to others, 1642, 1646, 1649). In 1810, after a gallant resistance, it fell into the hands of the British, who retained it till the general peace, 1814. In 1815, before the downfall of Napoleon, it was once more besieged by the English, and along with the Mauritius again fell into their hands. After the general pacification of Europe, Bourbon was restored to France, in whose possession it now is; but the adjoining island has since been retained by its English conquerors.

Bourdonnante (*Fr.*). A name formerly given to a kind of bombard of a heavy caliber.

Bourg-en-Bresse. A town of France, capital of the department of Ain. The town was captured by the allies in 1814.

Bourges. The capital of the department of the Cher, in France; captured by Cæsar, 52 B.C.; destroyed by Chilperic, 583; carried by assault by Pepin, 762; sustained a siege during the reign of Charles VII., in 1415; captured by the Protestants, 1562; by Henry IV., 1594; by the Protestants, 1615, and by Marshal Matignon in 1616.

Bourguignote, or **Bourgignotte** (*Fr.*). A helmet worn by the Burgundians, from whom it was named. It was of polished iron, with a visor. Under Louis XIV. their head-dress was changed to a kind of bonnet.

Bourlette (*Fr.*). In antiquity, a mace which was garnished with iron points.

Bournous, **Burnoose**, or **Burnos**. A kind of cloak or overcoat, used by the Arabs, and which constitutes a part of the military clothing of some corps of the French army.

Bouton, or **Boutouu** (*Fr.*). A kind of war-club, formerly used by the Caribs of the Antilles.

Bovianum (now *Bojano*). A town of Italy, 10 miles southwest of Campobasso. It was sacked by the Romans in 811, 805, and 298 B.C. During the second Punic war it was several times the headquarters of the Roman army.

Bouvines (Northern France). The site of a desperate battle, July 27, 1214, in which Philip Augustus of France was victorious over the emperor Otho and his allies, consisting of more than 150,000 men. The Counts of Flanders and Boulogne were taken prisoners.

Bow. A weapon made of a strip of wood, or other elastic material, with a cord connecting the two ends, by means of which, when drawn back and suffered to return, an arrow is propelled.

Bow, Cross. An ancient weapon of offense of the 11th century. Philip II., surnamed the Conqueror, introduced cross-bows into France. In this reign Richard I. of England was killed by a cross-bow at the siege of Chalus.

Bowie-knife. A knife from 10 to 15 inches long, and about 2 inches broad, worn as a weapon in the Southern and South-western States of the United States,—so named from its inventor, Col. James Bowie.

Bowman. A man who uses a bow; an archer.

Bow-shot. The space which an arrow may pass when shot from a bow.

Bowstring. The string of a bow. Also a string used by the Turks for strangling offenders.

Bowyer. The man who made or repaired the military bows was so called.

Boxer-cartridge. The metallic cartridge used in the service rifle of England. See **CARTRIDGE**.

Boxtel (in Dutch *Brabant*). Here the British and allied armies, commanded by the Duke of York, were defeated by the French republicans, who took 2000 prisoners and 8 pieces of cannon, September 17, 1794.

Box Pontons. See **PONTONS**.

Boyaca. A village of the republic of New Granada, South America, celebrated for the victory gained by Bolivar over the Spaniards, August 7, 1819, which secured the independence of Colombia.

Boyau. In military engineering, is a winding zigzag or trench, made by besiegers

to enable them to approach a town or fortified place under cover. These trenches are also called zigzags, or approaches.

Boyne. A river in Kildare, Ireland, near which William III. defeated his father-in-law, James II., July 1, 1690. The latter lost 1500 (out of 80,000) men; the Protestant army lost about a third of that number (out of 80,000). James fled to Dublin, thence to Waterford, and escaped to France. The Duke of Schömberg was killed, shot by mistake by his own soldiers as he was crossing the river.

Brabançons (*Fr.*). Soldiers of fortune, adventurers, freebooters of Brabant, who, during the Middle Ages, hired their services to those chiefs who paid them best.

Bracelet. In ancient times, a piece of defensive armor for the arm; a part of a coat of mail.

Bracket. The cheek of a mortar-carriage, made of strong plank.

Braconnière, or **Braggonnière** (*Fr.*). In antiquity, a mail-armor, of the shape of a petticoat, which was attached to the cuirass, and reached from the hips to the middle of the thigh, and sometimes below the knee.

Braga (anc. *Bracara Augusta*). The capital of the province of Minho, in Portugal; it is fortified and defended by a citadel. The Suevi were here vanquished by the Goths in 585.

Brailoff, **Brailow**, or **Ibraila**. A fortified town and the principal port of Wallachia, European Turkey. In 1770 the town was taken by the Russians, and almost razed to the ground; rebuilt, and again taken by the Russians in 1828, after a brave defense. It was restored to Turkey by the treaty of Adrianople in 1829. During the war of 1854-56, it was occupied by Russian troops.

Brake. That part of the carriage of a movable battery or engine which enables it to turn.

Brake. An ancient engine of war analogous to the cross-bow and balista.

Bramham. In Yorkshire, England; near here the Earl of Northumberland and Lord Bardolf were defeated and slain by Sir Thomas Rokeby, the general of Henry IV., February 19, 1408; and Fairfax was defeated by the royalists under the Duke of Newcastle, March 29, 1648.

Brand. The Anglo-Saxon for a burnished sword.

Brandenburg. A city in Prussia, founded by the Slavonians. Henry I., surnamed the Fowler, after defeating the Slavonians, fortified Brandenburg, 926, as a rampart against the Huns, and bestowed the government on Sigefroi, count of Ringelheim, with the title of Margrave, or protector of the marches or frontiers. Occupied by the French, October 25, 1806.

Branding. Was a mode of punishment, in nearly all armies, inflicted on soldiers who were convicted of the crime of desertion,—the branding or marking being with ink, or other similar preparation. This practice

is now discontinued in the American, and several European armies.

Brandschwaerm (*Ger.*). A small rocket which contained a bullet; it was fired out of a gun and used for the purpose of setting fire to straw-thatched buildings.

Brandywine. A river in Pennsylvania and Delaware, near which a battle took place between the British and Americans, in which the latter (after a day's fight) were defeated with great loss, and Philadelphia fell into the possession of the victors, September 11, 1777.

Brass. See **BRONZE**.

Brassar. A piece of defensive armor for the arm.

Brassart. In plate-armor, joined plates of steel which protected the upper part of the arm, from the elbow to the shoulder. When the front of the arm only was shielded, the pieces were called *demi-brassarts*.

Brasset. A casque or head-piece of armor.

Braunau. A town of Bohemia, Austria; captured by the French, October 28, 1805.

Bray. A small town in the department of Seine-et-Marne, France; it was occupied by the allies, February 12, 1814.

Brazil. An empire in South America, was discovered by Vincent Pinzon in February, and Pedro Alvarez de Cabral, a Portuguese, driven upon its coasts by a tempest, in 1500. The French having seized Portugal in 1807, the royal family and nobles embarked for Brazil, and landed March 7, 1808. Brazil declared war against Uruguay in February, 1865; entered into a treaty with Uruguay and the Argentine Republic against Paraguay, governed by Lopez, in May, 1865, and war was waged with varying results up to 1870.

Breach. Rupture made in a fortification to facilitate the assault. The operation by which the opening is produced is called *breaching*, and the guns used for this purpose are *breaching batteries*. To repair a breach, is to stop or fill up the gap with gabions, fascines, etc., and prevent the assault. To fortify a breach, is to render it inaccessible by means of chevaux-de-frise, crow's feet, etc. To make a lodgment in the breach. After the besieged are driven away, the besiegers secure themselves against any future attack in the breach. To clear the breach, that is, to remove the ruins, that it may be better defended.

Breach of Arrest. See **APPENDIX, ARTICLES OF WAR**, 65.

Bread and Water. A diet used as a military punishment.

Break Ground. Is to commence the siege of a place by opening trenches, etc.

Breast-height. In fortification, the interior slope of a parapet.

Breastplate. A plate worn upon the breast as a part of defensive armor.

Breastwork. In fortification, a defensive work breast-high, hastily thrown up, of earth or other material.

Brechin. A place in Scotland; sustained a siege against the army of Edward III., 1333. The battle of Brechin was fought between the Earls of Huntly and Crawford; the latter was defeated, 1452.

Breech. In ordnance, is the mass of solid metal behind the bottom of the bore, extending to the cascabel. The base of the breech is its rear surface.

Breech-block. The block of metal which closes the bore in breech-loading arms.

Breech-loader. A fire-arm that receives its load at the breech.

Breech-loading. Receiving the charge at the breech instead of the muzzle. A feature of modern small-arms. The principle, however, is very old, as some of the earliest guns were breech-loaders. A gun of the time of Henry VIII. still extant is substantially the same as the modern *Snider*. Puckle's revolver of 1718 was mounted on a tripod, and was very much like the *Gatling gun* in its general features. The first American patent was to Thornton & Hall, of Massachusetts, 1811. These guns were extensively issued to U. S. troops. There is a specimen in the West Point Museum. Prior to 1861 the best known breech-loading small-arms were *Sharps*, *Burnside's*, *Maynard's*, *Merrill's*, and *Spencer's*. See **SMALL-ARMS**.

In modern times the breech-loading principle for heavy ordnance has gained and lost favor at different epochs. On the continent of Europe it is generally accepted. Italy, however, has committed itself in the largest calibers to the enormous 100-ton muzzle-loaders of Sir William Armstrong. The same inventor introduced his breech-loading field-piece in England about 1850. His principle was approved and adopted for various calibers about 1858, but partial failures in his system led to an investigation by a committee of the House of Commons, 1862-63, and after a tedious discussion, the breech-loading principle was officially discarded (1866), though many of the guns were retained in the service. The successful application of hydraulic machinery in handling and loading heavy guns (1876) confirmed the government in its choice of muzzle-loaders. The difficulty of muzzle-loading in a turret and the impossibility of employing the great length of bore necessary to obtain the best results was, up to this time, the strong argument in favor of breech-loaders. Loading by hydraulic machinery from beneath the deck through a trap-door outside the turret obviated these objections to muzzle-loaders, and gave the gunners ample protection by closing the port, thus placing these guns for the time being on a par with breech-loaders. The bursting of the 38-ton gun on the "Thunderer" (1878), however, which has been generally attributed to double loading, has shaken confidence in hydraulic ramming, and now there is a strong current in favor of a return to breech-loaders. The splendid performance of *Krupp* guns on the practice-ground at Meppen, 1879, and the

numerous misfortunes which have recently befallen the Woolwich and Elswick systems, have doubtless had their weight in this change of opinion.

Breech Mechanism. The mechanism used for opening and closing the breech of a fire-arm and securing it against the escape of the gas. In *small-arms* this is readily accomplished. The use of the metallic cartridge-case renders any special gas-check unnecessary, as the case itself by being expanded against the walls of the chamber serves the purpose. The various mechanisms used in *small-arms* have been classified as follows: 1st, *Fixed chamber*; 2d, *Movable chamber*. The second class is now obsolete. The *fixed chamber* class is subdivided into—1st, *Barrel moves*; 2d, *Breech-block moves*. The first class comprises many of the *shot-guns* in use, the second, the best known of *military arms*. Under this latter class are the following subdivisions: 1st, *Sliding block*; 2d, *Sliding and rotating*; 3d, *Rotating about an axis*. We find excellent guns under each of these classes which are further subdivided as to the direction of the motions. The *Sharps'* may be taken as typical of the first of these classes, the *Hotchkiss magazine* gun of the second, and the *Springfield* of the third.

A similar classification may be made for *breech-loading* devices in *heavy ordnance*, but the problem here is not so simple. The pressure is much greater, the masses of metal much larger, and the cartridge must be used without a case to check the gas. Breech-loaders were impossible until the problem of checking the gas had been solved. The inventor of the first successful gas-check was an American, L. W. Broadwell, now residing abroad. The term *Broadwell ring* has been applied to all similar devices. This is a steel ring which fits in a recess reamed out in the rear of the chamber and abutting upon the breech-block. The inside of the ring is so shaped as to be pressed by the gas outwards and backwards, thus closing both the space outside of the ring and between it and the block. Broadwell is also the inventor of a breech mechanism which, with a few modifications, is that used by Krupp for all of his guns. The breech-block slides horizontally through a rectangular slot in rear of the chamber. In the *Armstrong* breech-loader, the block called the vent-piece is taken out and put in through a rectangular orifice on the top of the gun. It is locked in place by a hollow breech-screw. The French use a breech-screw with the threads cut away in longitudinal rows. The female-screw being similarly arranged, a very small rotation enables it to be entirely withdrawn. Among American devices are *Thompson's*, a breech-block which rolls to the side and opens or closes the bore. *Sutcliffe's*, a cylindrical block, with its axis parallel to the one hanging on a pin projecting from the front periphery of the hollow screw. The block is raised and locked by turning the screw, and

falls into a recess below when the screw is half turned back. *Mann's*, in which the gun rotates upwards about the trunnions something like a shot-gun, and many others.

Breech-pin. A strong plug firmly screwed in at the breech of a musket or other fire-arm.

Breech-sight. In gunnery, an instrument having a graduated scale of tangents by means of which any elevation may be given to a piece. Correctly speaking, the breech-sight gives the angle made by the line of aim or sight with the axis of the piece. The base of the breech-sight is a plate of brass curved to fit the base-ring or line, the scale and slides are similar to those of the pendulum hausse except that a hole is made in the plate, instead of a notch to sight through. Breech-sights are graduated for no *disparts*, a *front-sight* equal in height to the *dispart* being screwed into the top of the muzzle; in the Rodman guns, into the seat provided for the purpose between the trunnions. Breech-sights are also frequently held in sockets, and when the front-sight is placed on the trunnion, the socket is on the side of the breech. The *pendulum hausse* (see HAUSSE) is a breech-sight used for field-guns to correct the error arising from difference of level in the wheels of the carriage. The *Quinan breech-sight* (invented by Lieut. W. R. Quinan, 4th U. S. Artillery) is an improvement on the pendulum hausse. It is fixed in a socket on the right side of the breech. The scale has a spirit-level, by means of which it is made vertical. The front sight is a short tube with cross-hairs fixed in it. The advantages claimed over the hausse are increased steadiness and accuracy.

Bregenz, or Bregents. A town of Tyrol, Austria; it was occupied by the French in 1799.

Breisach, Old. A very old town of the grand duchy of Baden; taken by Ariovistus when he invaded Gaul. Being regarded as the key to the west of Germany, it was a prominent scene of action during the Thirty Years' War, at the conclusion of which it was ceded to the French. During the next century it frequently changed masters, now belonging to France and now to Austria; its fortifications were destroyed by the French in 1744, and during the war of the Revolution, in 1798, part of the town was burned by them. In 1806 the French handed it over to the house of Baden.

Breitenfeld. A village and manor of Saxony, about 5 miles north of Leipsic. It is historically remarkable for three battles, fought on a plain in its neighborhood. The first of these, between the Swedes and the Imperialists, which was fought September 7, 1631, was of the highest importance to Europe, as it secured the permanency of Protestantism and the freedom of Germany. Tilly's pride had reached its highest point after the fall of Magdeburg, which took place on May 20, 1631; and in the early

part of September of the same year he advanced against the Saxons with an army of about 40,000 men for the purpose of forcing the elector, John George I., into an alliance with the emperor. Gustavus Adolphus, king of Sweden, joined by the Saxons, advanced towards Leipsic, where Tilly lay, the latter advancing into the plain of Breitenfeld. The Imperial forces were completely defeated, and their three most distinguished generals, Tilly, Pappenheim, and Fürstenberg, wounded. The second battle which Breitenfeld witnessed again, resulted in the triumph of Swedish valor: it took place on October 28, 1642, between the Swedes, headed by Torstenson, one of the pupils of Gustavus, who had invested Leipsic, and the Archduke Leopold, with Gen. Piccolomini, who were advancing from Dresden to its relief. The Swedes gained a complete victory over the Imperialists, who fled into Bohemia, leaving behind them 46 cannon, 121 flags, 69 standards, and the whole of their baggage. The third battle of which Breitenfeld was the scene was fought on October 16-18, 1813. See LEIPSIC.

Bremen (Northern Germany). Said to have been founded in 788; in 1648 it was erected into a duchy and held by Sweden till 1712; it was taken possession of by Denmark in 1731, by whom it was ceded to Hanover; it was taken by the French in 1757, who were expelled by the Hanoverians in 1758; annexed by Napoleon to the French empire in 1810; its independence restored in 1813; its old franchises in 1815. It became a member of the North German Confederation in 1866.

Brenneville (Northwest France). Here Henry I. of England defeated Louis VI. of France, who had embraced the cause of William Clinton, son of Robert, duke of Normandy, August 20, 1119.

Brenta. A river which rises in Tyrol and flows, after a course of 90 miles, into the Adriatic Sea, at Porto di Brondolo. On the banks of this river the French twice defeated the Austrians in 1796.

Brentford. A county town of Middlesex, England. Here Edmund Ironside defeated the Danes, May, 1016. It was taken by Charles I., after a sharp fight, November 12, 1642.

Brescelia, or **Bregelia** (anc. *Brizellum*). A town on the right bank of the Po, in North Italy. Here the emperor Otho put himself to death in 69. On May 20, 1427, an army under Duke Philip Maria Visconti, of Milan, was here defeated by an army sent against him by the republic of Venice, under Francis Carmagnola.

Brescia. A town in Northern Italy (the ancient *Brizia*), became important under the Lombards, and suffered by the wars of the Italian republics, being attached to Venice. It was taken by the French under Gaston de Foix in 1512, when it is said 40,000 of the inhabitants were massacred. It surrendered to the Austrian general Haynau, March 30,

1849, on severe terms; annexed to Sardinia in 1859.

Breslau. Capital of the province of Silesia, Prussia; it was burnt by the Mongols in 1241, and conquered by Frederick II. of Prussia in January, 1741. A fierce battle took place here between the Austrians and Prussians, the latter under Prince Bevern, who was defeated November 22, 1757. Breslau was taken, but was regained, December 21, the same year; besieged by the French, and surrendered to them January, 1807, and again in 1818.

Bressuire. A small town of France, department of Deux-Sèvres; it was fortified during the Middle Ages, and was captured from the English by the celebrated Du Guesclin in 1373; it was nearly destroyed during the wars of La Vendée.

Brest. A seaport in Northwestern France; besieged by Julius Cæsar, 54 B.C.; possessed by the English in 1378; given up to the Duke of Brittany in 1890. Lord Berkeley and a British fleet and army were repulsed here with dreadful loss in 1694. The magazine burnt to the value of some millions of pounds sterling, 1744; marine hospital, with 50 galley-slaves, burnt, in 1766; the magazine again destroyed by fire, July 10, 1784. England maintained a large blockading squadron off the harbor from 1793 to 1816, but with little injury to France. It is now a chief naval station of France, and from the fortifications and other vast works of late construction it is considered impregnable.

Bretigny, Peace of. Concluded with France, May 8, 1360, by which England retained Gascony and Guienne, and acquired other provinces; renounced her pretensions to Maine, Anjou, Touraine, and Normandy; was to receive 3,000,000 crowns, and to release King John, long a prisoner. The treaty not being carried out, the king remained and died in London.

Breuci. A powerful people of Pannonia, near the confluence of the Savus and the Danube, took an active part in the insurrection of the Pannonians and Dalmatians against the Romans, 6 A.D.

Brevet. An honorary rank conferred upon an officer, for meritorious services, above the rank he holds in his own corps. In the U. S. army rank by brevet is conferred, by and with the advice and consent of the Senate, for "gallant actions or meritorious services." A brevet rank gives no right of command in the particular corps to which the officer brevetted belongs, and can be exercised only by special assignment of the President. Officers while so serving under assignment are said to have *local rank* (which see).

Brevet. To confer rank or title upon by brevet.

Brevetcy. The rank or condition of a brevet.

Bricole. An improved kind of traces used by the French in drawing and manœu-

vring artillery; analogous to the old drag-rope, but having the addition of a leather strap or girdle with a buckle, to which the drag is affixed, and an iron ring and hook at the end to drag by.

Bridge. A structure usually of wood, stone, brick, or iron, erected over a river or other water-course, or over a ravine, railroad, etc., to make a continuous roadway from one bank to the other.

Bridge. In gunnery, two pieces of timber which go between the two transoms of a gun-carriage. Not used in the U. S. service.

Bridge, Flying. See PONTONS.

Bridge, Trail. See PONTONS.

Bridge, Train. See EQUIPAGE.

Bridge, Trestle. See TREESTLE BRIDGE.

Bridges. When a river is more than 4 feet in depth, or when its bottom is of mud or quicksand, recourse must be had either to ferrying by means of boats, rafts, etc., or to military bridges. The latter are always to be preferred when circumstances will permit their establishment.

Military bridges are composed of a roadway and its supports; the first consists of beams or balks reaching across the adjacent supports, and covered with plank called chess.

The supports, from which the bridge takes its name, may be either fixed, as trestles, gabions, carriages, piles, or floating, as pontons, boats of commerce, rafts, etc.

Ponton bridges are preferable to all others when a passage by main force or surprise is to be undertaken. They may be constructed on any stream of sufficient depth; they may be replaced by rafts when the velocity of the stream does not exceed 6 feet per second. In swifter currents the latter are unmanageable, drag their anchors, and are liable to destruction from floating bodies.

Trestle bridges may be constructed in rivers whose depth does not exceed 9 feet, and whose velocity is not more than 6 feet. They may be employed with advantage in rivers of moderate depth and gentle current, with hard, even bottoms. When the bed of the river is uneven the adjustment of the trestles to the bottom is very tedious, and if the current is rapid, almost impossible. When the bed is of mud or fine sand, the settlement of the legs is liable to be irregular.

Gabion bridges are used over marshes and shallow streams. They consist of gabions constructed in the ordinary way, and of a height necessary to give a level road; these are placed in rows perpendicular to the axis of the bridge, are filled with stones or gravel, and are capped with a piece of timber on which the balks rest.

Pile bridges are superior in point of stability to all other military bridges, but requiring much labor and time in their construction; they are usually restricted to securing the communications in rear of the army.

Bridge-head. A fortification covering the extremity of a bridge nearest the enemy.

The French term for the same is *tête du pont*.

Bridle. An instrument with which a horse is governed and restrained, consisting of a head-stall, a bit and reins, with other appendages, according to its particular form and uses.

Bridle. In gunnery, the piece in the interior of a gun-lock, which covers and holds in place the tumbler and sear, being itself held by the screws on which they turn.

Bridle, Arm Protect. The term for a guard used by the cavalry, which consists in having the sword-hilt above the helmet, the blade crossing the back of the head, with the point of the left shoulder, and the bridle-arm; its edge directed to the left and turned a little upwards, in order to bring the mounting in a proper direction to protect the hand.

Bridoon. The snaffle rein of a military bridle, which acts independently of the bit, at the pleasure of the rider.

Brieg. A town of Silesia, Prussia, about 27 miles from Breslau; it was taken by Frederick II., April 4, 1741; dismantled by the French in 1807.

Briel, Brielle, or The Brill. A fortified seaport town on the north side of the island of Voorne, Holland. It was the nucleus of the Dutch republic, having been taken from the Spaniards by William de la Marck in 1572. This event was the first act of open hostility to Philip II., and paved the way to the complete liberation of the country from a foreign yoke. Briel was the first town of Holland which, without extraneous aid, expelled the French in 1813. The celebrated admirals De Witt and Van Tromp were natives of this place.

Brienne, or Brienne le Château. A town of France, department of the Aube. It has a fine castle, but it is chiefly celebrated as the place where Napoleon received the rudiments of his military education, and where, in 1814, a bloody battle was fought between the French and the allied forces of Russia and Prussia.

Brier Creek. In Warren Co., Ga. An American force 2000 strong, under Gen. Ashe, was defeated on this creek by the English under Prevost, March 4, 1779.

Brigade. A body of troops, whether cavalry, artillery, or infantry, or a mixed command, consisting of two or more regiments, under the command of a brigadier-general. Two or more brigades constitute a division, commanded by a major-general; two or more divisions constitute an army corps, or *corps d'armée*, the largest body of troops in the organization of the U. S. army.

Brigade. To form into a brigade, or into brigades.

Brigade. In the British service the artillery is divided into brigades, which consist of seven batteries each, under the command of a colonel. The Household Brigade is composed of the Horse Guards, Life Guards, and Foot Guards.

Brigade-Inspector. An officer whose duty it is to inspect troops in companies before they are mustered into the service.

Brigade-Major. An officer appointed to assist the general commanding a brigade in all his duties.

Brigadier-General. An officer in rank next above a colonel and below a major-general. He commands a brigade; and this officer is sometimes called simply brigadier.

Brigand. A species of irregular foot soldiers, frequently mentioned by Froissart. From their plundering propensities comes the modern use of the term.

Brigandine, or Brigantine. A coat of mail, consisting of thin, jointed scales of plate, pliant and easy to the body.

Brigantes. The most powerful of the British tribes, inhabited the whole of the north of the island from the Abus (now Humber) to the Roman wall, with the exception of the southeast corner of Yorkshire. They were conquered by Petilius Cerealis in the reign of Vespasian. There was also a tribe of this name in the south of Ireland.

Brignais (anc. *Priscinniacum*). An ancient fortress in France, department of the Rhone; it was captured in 1861 by bodies of adventurers, called *Grandes Compagnies*. Prince Jacques de Bourbon made an effort to dislodge them, but was completely defeated, and died of wounds received upon this occasion.

Brihuega. A town of New Castile, Spain; it was formerly surrounded by walls, of which traces still exist. Here, in 1710, during the War of the Succession, the English general Stanhope, owing to the dilatoriness of his allies in affording him support, was defeated by the Duke of Vendôme, and compelled to surrender with all his force, amounting to about 5500 men.

Brindisi (anc. *Brundisium*). A fortified seaport of Italy, on a small bay of the Adriatic; it was the usual place of embarkation for Greece and the East; taken by the Romans from the Sallentines in 267 B.C., and was afterwards the principal naval station of the Romans on the Adriatic. During the civil war between Cæsar and Pompey, this place was invested by Cæsar in 49 B.C.

Brins d'Est (*Fr.*). Large sticks or poles resembling small pickets, with iron at each end. They were used to cross ditches, particularly in Flanders.

Briac-mur (*Fr.*). A heavy piece of ordnance which was used during the 15th century to batter down walls, etc.

Briassarthe. A village of France, department of Maine-et-Loire. Here the Normans were defeated in 886 by Robert the Strong.

Bristol (West England). Built by Brennus, a British prince, 380 B.C.; is mentioned in 430 as a fortified city; taken by the Earl of Gloucester in his defense of his sister Maud, the empress, against King Stephen, 1138; taken by Prince Rupert, 1643; by Cromwell, 1645.

Brisure. In fortification, any part of a rampart or parapet which deviates from the general direction.

Britain (called by the Romans *Britannia*, from the Celtic name *Prydhain*). The Celts, the ancestors of the Britons and modern Welsh, were the first inhabitants of Britain; it is referred to by Herodotus, 450 B.C.; invaded by Julius Cæsar, 55-54 B.C.; Aulus Plautus and Vespasian reduced South Britain, 47. Romans defeated by Boadicea; 70,000 slain, and London burnt; she is defeated by Suetonius; 80,000 slain, 61. Agricola, governor, conquers Anglesea, and overruns Britain in seven campaigns, and reforms the government, 78-84. He defeats the Caledonians under Galgacus; surrenders the island, 84. The Romans held sway in Britain down to about 420, soon after which time the Saxons invaded South Britain, and ultimately subdued it. It was merged into the kingdom of England about 829. See ENGLAND.

Britain, Great. The name given in 1604 to *England, Wales, and Scotland*.

Briteste. A small town of France, in the old province of Guienne; besieged by the Duke of Vendôme in 1622, who was compelled to retreat, without accomplishing his object, after firing 2000 shots; he made five assaults and lost 1500 men.

British Legion. Raised by Lord John Hay, Colonel De Lacy Evans, and others, to assist the queen of Spain against the Carlists in 1835; defeated them at Hernani, May 5, 1836, and at St. Sebastian's, October 1.

Brittany, or Bretagne (Northwest France). The ancient *Armorica*. Conquered by Julius Cæsar, 56 B.C. Brittany was formerly united to the monarchy, 1582; held by the Spaniards, 1591; recovered by Henry IV., 1594. The Bretons took part in the Vendean insurrection in 1791.

Brixham. A seaport town in the county of Devon, England. Here William III. (of Orange) landed in England on November 6, 1688.

Brizure, Brizé, or Brisé. Terms used in heraldry to indicate that a charge is bruised or broken.

Broad-axe. A military weapon used in ancient times.

Broadsword. Is a sword with a broad blade, for cutting only, not for stabbing, and therefore not sharp at the point like a sabre.

Broadwell Ring. A gas-check for use in heavy breech-loading guns, invented by L. W. Broadwell. See BREECH MECHANISM.

Brod (Slavonian). A military frontier fortress of Austria, on the Save, defended by a fort. Here Ziska defeated the emperor Sigismund in 1422.

Broke. Sentence of a court-martial depriving an officer of his commission, or a non-commissioned officer or warrant-officer of his warrant. Also said of a non-commissioned officer being reduced by order.

Brondolo. A fortified village of Northern Italy, on the Brenta-Nuova; it was

formerly a flourishing town; destroyed by the Genoese in 1880.

Broni. A town of Redmont, in the province of Alessandria, about 11 miles southeast of Pavia. In its vicinity is the castle of Broni, celebrated in history as the place where Prince Eugène obtained a victory over the French in 1703.

Bronnitsa. A town of Russia, in the government of Novgorod, on the Masta. Here the Swedes defeated the Russians in 1614.

Bronze. See **ORDNANCE, METALS FOR, BRONZE.**

Bronze. Gun-barrels are bronzed by acting upon them with the chloride or butter of antimony, or with hydrochloric or nitric acids, when the surface of the iron gets partially eaten into, and covered with a thin film of oxide, after which the gun-barrel is thoroughly cleaned, oiled, and burnished. A brownish shade is thus communicated to the barrel, which protects it from rust, and at the same time renders it less conspicuous to an enemy.

Brooke Gun. See **ORDNANCE, CONSTRUCTION OF.**

Brooklyn. A city and seaport of the United States, at the extremity of Long Island, opposite New York City. In 1776 this part of Long Island was one of the principal localities of the war of independence. Here on August 27, 1776, was fought the first great battle of the Revolutionary war after the Declaration of Independence. The American army occupied Manhattan, Governor's, and Long Islands, a large force being placed by Washington under the command of Gen. Greene in a fortified camp extending from Wallabout Bay to Gowanus Cove. Unfortunately, Gen. Greene was taken sick, and four days before the battle the command was given to Gen. Putnam. On August 22 the British forces under Lord Howe landed and encamped at the western point of Long Island. About midnight on the 26th the British attacked the American left, and about daybreak on the 27th the Hessians under Von Heister attacked the centre, and were met bravely by the American forces; but an important pass through the hills on their right, called the Jamaica Pass, being left unguarded, a select body of English troops poured through, followed by Percy and Cornwallis with the main army, and, attacking them from the flank and rear, drove the patriots in confusion with heavy loss. On the night of the 29th, Washington succeeded, under cover of a dense fog, in withdrawing all his troops from Brooklyn to New York, and finding it impossible to defend that city, he removed his forces to the heights of Harlem. During the civil war Brooklyn was not surpassed by any city in her zeal for the cause of the Union.

Brother Officers. Those of the same regiment.

Brother Soldier. See **SOLDIER.**

Brownbill. The ancient weapon of the

English foot soldiers, resembling a battle-axe.

Browning. See **BRONZE.**

Bruges. A city in Belgium. In the 7th century it was the capital of Flanders, and in the 18th and 14th centuries had become almost the commercial metropolis of the world. It suffered much through an insurrection in 1488, and the consequent repression. It was incorporated with France in 1794, with the Netherlands in 1814, and with Belgium in 1830.

Brumaire. A division of the year in the calendar of the French Republic. It is derived from the Latin *bruma*, "winter," and included the time from October 23 to November 21. The celebrated 18th Brumaire, which witnessed the overthrow of the Directory and the establishment of the sway of Napoleon, corresponds with November 9, 1799, of the Gregorian calendar.

Brunanburg (supposed by some to be near Ford, Northumberland, England). Anlaf, with an army of Northmen from Ireland, and Constantine III., king of Scots, landed at the mouth of the Humber, and were defeated with very great slaughter at Brunanburg by Athelstan in 937.

Brunette, La. An ancient fortress of Piedmont; dismantled by the French in 1798.

Brünn. Capital of Moravia. Its citadel was blockaded by the Hungarians in 947; the town was besieged by the Swedes in 1645, and by the Prussians in 1742; entered by the French under Murat, November 18, 1805, and by the Prussians, July 18, 1866.

Brunswick. A city of Germany, the capital of a duchy of the same name. It was formerly fortified; besieged in 1761, and a combat took place under its walls in 1813.

Brunt. The troops who sustain the principal shock of the enemy in action are said to bear the brunt of the battle.

Bruttium (now *Calabria Ultra*). In Southern Italy; the Bruttians and Lucanians defeated and slew Alexander of Epirus at Pandosia, 326 B.C. They were conquered by Rome 277 B.C.

Brüx, or Brix. A town of Bohemia, on the river Bila. Here the Prussians defeated the Austrians in 1759.

Bruyeres-sous-Laon. A town of France, in the department of the Aisne. It was captured and pillaged by the Normans in 882; sacked by the English in 1358 and 1373; Jean de Luxembourg took possession of it in 1433, and the Calvinists in 1567.

Brzesc Litewski. A fortified town of Russia, in the government of Grodno. Here the Russians defeated the Poles in 1794. The Poles were 13,000 strong, out of which 500 were taken prisoners, 800 escaped, and the remainder fell on the field of battle.

Buccellarii. An order of soldiery under the Greek emperors, appointed to guard and distribute the ammunition bread, though authors are somewhat divided as to their office and quality.

Bucephalus. The celebrated horse of Alexander the Great, which no one could ride except that monarch, and which is said to have carried Alexander through all his Indian campaigns. He died about 327 B.C., and Alexander built the city of Bucephala, on the Hydaspes, in his honor.

Bucharest. The capital of Wallachia; preliminaries of peace were ratified at this place between Russia and Turkey, May 28, 1812. The subsequent war between these powers altered many of the provisions of this treaty. Bucharest was occupied by the Russians, Turks, and Austrians successively in the Crimean war. The last quitted it in 1866.

Buck and Ball. A cartridge for small-arms. See CARTRIDGE, BUCK-AND-BALL.

Buck-board. A simple four-wheeled vehicle, consisting of a board resting on the axle-trees, forming a spring seat by its elasticity.

Buckler. A kind of shield or piece of defensive armor, anciently used in war. It was often 4 feet long, and covered the whole body.

Buckshot. A small leaden bullet, weighing about 165 to the pound.

Buda, or Ofen. A free city of the Austrian empire, on the west bank of the Danube, opposite Pesth, and with it the capital of Hungary. It was taken by Charlemagne in 799; and sacked by Solyman II. after the battle of Mohatz, when the Hungarian king, Louis, was killed, and 200,000 of his subjects carried away captives, 1526. Buda was sacked a second time, when the inhabitants were put to the sword, and Hungary was annexed to the Ottoman empire, 1641. Retaken by the Imperialists, under the Duke of Lorraine, and the Mohammedans delivered up to the fury of the soldiers, 1686. It suffered much in 1848, and was entered without resistance by the Austrians, January 5, 1849. Here the emperor Francis Joseph was crowned king of Hungary, June 8, 1867. See PESTH.

Budrich. A town of Rhenish Prussia, on the left bank of the Rhine, opposite Wesel. Here the Duke of Lorraine was defeated by the emperor Otho I. It was taken by the French in 1672; burned by the French in 1818.

Budge-barrel. A small barrel with only one head; on the other end a piece of leather is nailed, which is drawn together with a string, like a purse. It is used for carrying powder from the magazine to the battery, in siege or coast service.

Buena Vista. A celebrated battle-field of Mexico, situated about 90 miles south west of Monterey and 7 miles from Saltillo, famous for the victory gained there by an American force not 5000 strong, under Gen. Zachary Taylor, over a Mexican army four times their number under Santa Anna, February 22-23, 1847. Gen. Taylor, on the way from Victoria to Monterey, having learned that Santa Anna was threatening him with an overwhelming force, decided to withdraw

his troops from their camp at Agua Nueva to a position more favorable for withstanding a superior force, which had been selected a little south of the small village of Buena Vista, at a point where the road passed through a mountain gorge called Angostura. Accordingly, on the afternoon of February 21, the camp at Agua Nueva was broken up, and Santa Anna, believing the American forces were retreating, eagerly pursued them until he was drawn into their chosen position. After a useless summons to surrender, on the afternoon of the 22d the Mexicans opened the attack on the American left, but they made no impression, while they suffered severe loss. During the night the Mexicans occupied a position on the heights to the east of the American lines with the intention of forcing their left flank, and it was here that the fighting commenced on the 23d, and continued during the day with varying success, finally resulting in the repulse of the enemy. Meanwhile a force of Mexican cavalry had been detached to attack the American camp at Buena Vista, but was gallantly repulsed. The final attack was made against the American centre—where Gen. Taylor commanded in person—by Santa Anna himself, with his entire reserve, but he was met with such a deadly fire from the American batteries that he was obliged to draw off his much-diminished forces, and during the night he fell back to Agua Nueva. The American loss in killed and wounded was about 700; the Mexicans lost about 2000.

Buenos Ayres. A province of the Argentine Republic, with a capital of the same name. A British fleet and army took the city with slight resistance, June 27, 1806; retaken August 12, 1806. Gen. Whitelock and 8000 British entered Buenos Ayres, and were severely repulsed, July 5, 1807; independence of the province declared July 19, 1816; a prey to civil war for many years. It seceded from the Argentine Republic in 1853, and was reunited to it in June, 1860.

Buffalo. See PACK AND DRAUGHT ANIMALS.

Buffalora. A town of Italy, on the river Ticino. In its environs in 1686, the French and Spanish armies met in combat, in which the former were victorious. There is a bridge at this place crossing the Ticino, over which a division of the invading army of Austria marched, April-29, 1859. This was the first act of overt hostility in the war between Austria and Sardinia.

Buff Coat. A close military outer garment, with short sleeves, and laced tightly over the chest, made of buffalo-skin, or other thick and elastic material, worn by soldiers in the 17th century as a defensive covering.

Buffer, Pneumatic. See AIR CYLINDERS.

Buffers. See HURTER.

Buff Jerkin. Originally a leathern waistcoat; afterwards one of a buff color, worn as an article of dress by sergeants and catchpoles; used also as a dress.

Buff Leather. A sort of leather prepared from the buffalo, which, dressed with oil, makes what is generally called buff-skin. In European armies, troopers' breeches, shoulder-belts, and sword-belts are made of this leather.

Buff Stick. A wooden stick covered with buff leather, used by soldiers in cleaning their equipments.

Bugle-horn, or Bugle. The old Saxon horn, now used by all infantry regiments. By its soundings their manœuvres are directed, either in advancing, skirmishing, or retreating.

Bugler. One who plays a bugle.

Built-up Guns. See *ORDNANCE*.

Bukors. Kettle-drums of the Swedish cavalry.

Bulgaria. Anciently *Mesia*, now part of European Turkey. The Bulgarians were a Slavonian tribe, who harassed the Eastern empire and Italy from 499 to 678, when they established a kingdom. They defeated Justinian II., 687; but were subdued, after several conflicts, by the emperor Basil in 1018. After defeating them in 1014, having taken 15,000 Bulgarian prisoners, he caused their eyes to be put out, leaving one eye only to every hundredth man, to enable him to conduct his countrymen home. The kingdom was re-established in 1086; but after many changes, was annexed to the Ottoman empire, 1396.

Bull. A fort which the English possessed in Canada, and which constituted one of their military depots; it was captured by the French, March 27, 1758.

Bulletin. A brief statement of facts respecting some passing events, as military operations, etc.

Bullet-mold. An implement containing a cavity of the proper shape into which lead is poured to form a bullet.

Bullet-proof. Capable of resisting the force of a bullet.

Bullets. Are projectiles of lead to be discharged from various kinds of small-arms. The first bullets used were round, and were designated by the number weighing one pound. The sizes employed were very large. Until quite recently the round ball still held its place with rifles and smooth-bores. Various devices were used for making it take the grooves of the rifle,—a guard-patch being among the best. (See *SMALL-ARMS*.) It was with this that the early settlers of America won their reputation as marksmen. Robins, in 1742, showed the superiority of the conical form, but it was not till about 1840 that round balls were generally discarded. The conical bullet was often used in grooves with an increasing twist, and gave wonderfully accurate results at short range. For long ranges, long bullets are necessary, and these require uniform twists, which are now generally used in military arms. Various forms of the elongated bullets were used. Most of these bullets had an expansive base, either hollow or plugged with

wood; the design being to force the soft lead outward, so as to cause it to fit the grooves of the rifle, and thus give the bullet a rotation around its long axis during the motion forward. (See *SMALL-ARMS*.) This rotation, as is well known, increases the range and precision. Bullets were formerly cast, but now they are more frequently stamped in steel dies, and, as in breech-loading arms, the bullet takes the grooves by compression; the exploding base is omitted. The form of bullet now used in military arms is the cylindrical conoidal. The tendency recently has been to reduce the caliber. (See *PROJECTILES*.) Copper bullets are used by the Circassians. Bullets of stone were used in 1514; iron ones are mentioned in the *Fœdera*, 1550, and leaden ones were made before the close of the 16th century.

Bullets, Explosive. Oblong bullets carrying a percussion-cap on the front end and sometimes containing a small charge of powder in a cavity, used to blow up caissons and magazines. There is a strong sentiment against the use of these bullets in firing at troops.

Bullets, Express-. An explosive bullet of great killing power, used in hunting large game. It is of large caliber but quite light, being much shorter than the ordinary rifle-bullet. A cylindrical cavity bored in at the point carries a small metallic cartridge-case filled with powder. It is fired with a large charge of powder, which, owing to its lack of weight, gives it a high initial velocity and a very flat trajectory up to about 200 yards, obviating the necessity for an elevating sight. *The Winchester Express-bullet* (a good type of those made in America) has a caliber of .50, weighs 300 grains, and is fired with 95 grains of powder, giving an initial velocity of 1640 feet. It is made of pure lead, the softness of which increases its deadliness. The shock from this bullet will bring down the largest game. See *EXPRESS-RIFLE*.

Bullets, Grooved. Bullets having grooves, or cannelures. These grooves were originally used to increase the relative resistance of the air on the rear of the bullet, thus assisting the rotation in keeping the point to the front. In muzzle-loading arms they also increased the *setting up* of the bullet to take the grooves. They are now used to hold the lubricant, and to facilitate the swaging action of the grooves and lands in breech-loading guns. For the other form of modern bullets, see *BULLETS, PATCHED*.

Bullets, Patched. One of the forms of modern rifle-bullets. The bullet has wrapped around its cylindrical portion a layer of thin paper called the *patch*. The bullet is perfectly smooth. The other form has grooves, or cannelures. (See *BULLETS, GROOVED*.) The lubricant for the patched bullet is a greased wad or disk of wax, placed between powder and bullet. The *grooved bullet*, carrying its own lubricant, is best adapted to shallow lands and grooves. The *patched*

bullet to sharp lands. The grooved bullet would seem to be the best for military service, as the cartridge-case can be tightly crimped upon it, making the case waterproof. For very long range the best shooting has been done with patched bullets.

Bullets, Percussion-. See BULLETS, EXPLOSIVE.

Bullock. See PACK AND DRAUGHT ANIMALS.

Bull Run Battles. See MANASSAS.

Bull's-eye. In gunnery and archery, is the centre of a target.

Bulwark. In fortification, a rampart or bastion; an outwork for defense; that which secures against an enemy; a shelter or means of protection.

Bunker Hill. A hill in Charlestown, now part of Boston, Mass., which gave its name to the first important battle of the American Revolution. The Americans learning that Gen. Gage, who was in command of the British forces in Boston, intended to fortify Bunker Hill, determined to forestall his design, and for this purpose a detachment of 1000 men under Col. Prescott was ordered on the night of June 16, 1775, to throw up a breastwork on the hill. After a consultation, however, it was decided to fortify instead another eminence which was nearer to Boston, known as Breed's Hill. During the night they worked with such activity that by daybreak a strong redoubt was nearly completed. Upon its discovery by the British on the morning of the 17th, they opened fire on it from the ships in the harbor, and Gen. Gage sent about 8000 men under Howe and Pigot to attack it. They landed under cover of the fire from the guns, and setting fire to Charlestown, advanced to the attack. The Americans awaited their approach in silence until the whites of their eyes could be seen, then poured a deadly fire into their ranks, causing them to retreat in disorder. They were rallied by Howe, and again advanced over the same ground with a like result as on the first attack. Clinton now arrived with reinforcements, and an attack was made on three sides of the redoubt at once. The ammunition of the Americans being now exhausted they met their assailants with clubbed muskets, but the superiority of the British in numbers being so great, Col. Prescott ordered a retreat. This was effected across Charlestown Neck, where they were exposed to a galling fire from the ships in the harbor. During the retreat Gen. Warren was killed, and the Bunker Hill monument erected to commemorate this engagement now stands near the spot where he fell. The British loss was over 1000 killed and wounded; the Americans lost less than half that number.

Bureaux. See Military Departments throughout this work under appropriate headings.

Buren. A town of Switzerland, canton of Berne. It was the scene of several com-

bats. The Spaniards under Gilles de Barlemon took possession of it in 1575.

Burford. A town in the county of Oxford, England. It is celebrated for a battle fought between Cuthred, king of the West Saxons, and Ethelbald, king of the Mercians; and for a victory by Fairfax in 1649 over the army of Charles I. at Edgehill, in its vicinity.

Burganet, or Burgonet. A kind of helmet used by the French.

Burgos. A city of Spain, capital of the new province of the same name, was founded in 844; sacked by the French in 1808; in 1812 the castle was four times unsuccessfully besieged by Wellington, who, however, took it in the following year, when the French blew it up, as well as the fortifications.

Burguete. A town of Navarre, Spain. Here the army of Charlemagne was defeated in 778.

Burgundy. A large province in France, derives its name from the Burgundians, a Gothic tribe who overran Gaul in 275, but were driven out by the Emperor Probus; they returned in 287, and were defeated by Maximin. In 413 they established a kingdom, comprising the present Burgundy, large parts of Switzerland, with Alsace, Savoy, Provence, etc., Gondicaire, their leader, the first king. It was conquered by the Franks, 534. Annexed to France, 1477.

Burhampoor. A town of Hindostan, in the province of Bengal. It is one of the military stations of the British government; and the cantonments, consisting of a grand square inclosing a fine parade ground, command the notice of the traveler. It was captured by the English troops under Col. Stevenson in 1803.

Burial Honors. See FUNERAL HONORS.

Burich. A small town in the circle of Lower Rhine; its fortifications were burned by the French in 1672.

Burkersdorf. A village of Austria, where a combat took place between the Prussians and Austrians, July 21, 1762, in which the former were victorious.

Burley. The butt end of a lance.

Burlington Heights. Here a fierce contest took place between the British and the U. S. forces, June 6, 1813. The British carried the heights.

Burmah, Burma, or Birmah. Also called the Burmese empire, or kingdom of Ava, formerly the most extensive and powerful state in Farther India. The most celebrated ruler of the country was Alompra, the founder of the present dynasty, who reigned about the middle of the 18th century. The Burmese became involved in a war with the English 1824-26, which terminated in the curtailment of their power and the loss of several provinces.

Burning, Quickness of. The relative quickness of two different powders may be determined by burning a train laid in a circular or other groove which returns into itself, one-half of the groove being filled with

each kind of powder, and fire communicated at one of the points of meeting of the two trains; the relative quickness is readily deduced from observation of the point at which the flames meet.

Burnish. In a military sense, is to give a peculiar lustre to a gun-barrel or other part of a rifle by rubbing it with a piece of steel. It is generally forbidden as injurious to the gun.

Burque (Fr.). A kind of cuirass which was worn with the brigantine.

Burr. In gunnery, a round iron ring, which serves to rivet the end of the bolt, so as to form a round head.

Burrel-shot. Small shot, nails, stones, pieces of old iron, etc., put into cases to be discharged from any piece of ordnance. Very seldom used.

Bursting. The simplest method of bursting open strong gates is, to explode a bag of gunpowder containing 50 or 60 pounds suspended near the middle of the gate upon a nail or gimlet, by means of a small piece of port-fire inserted at the bottom, and well secured with twine.

Busaco. A hamlet in the province of Beira, Portugal. Here the British under Wellington repulsed an attack of the French under Masséna, September 27, 1810. The French lost about 4000 killed and wounded; the English loss did not exceed 1800.

Busby. A military coiffure, or cap, or bear-skin; the French *colback*.

Bushiere (on the Persian Gulf). Attacked by sea by Sir H. Leeke, and by land by Gen. Stalker, was taken December 10, 1856. The place proved stronger than was expected, and was bravely defended.

Bushing a Gun. Inserting a piece of metal about an inch in diameter (near the bottom of the bore) through the centre of which the vent has been previously drilled. It is screwed in. The object of bushing a piece is to prevent deterioration of the vent, or provide a new one, when this has already occurred. In bronze pieces pure copper is always used in bushing, as it is not so liable to run from heat as gun-metal. Only rifled and bronze pieces are bushed.

Bushwhackers. This term was used during the civil war to designate a class of men who claimed to be non-combatants in the presence of a superior force, and who, to outward appearance, pursued their peaceful avocations, but who did not hesitate, when

an opportunity offered, to slay stragglers, and pick off soldiers from ambush. When caught in the commission of such acts they were treated with merciless severity.

Buskins. A kind of shoe, or half-boot, adapted to either foot, formerly part of the Roman dress. They are now worn by some European armies.

Butin (Fr.). Booty or pillage. At the beginning of the French monarchy, and for a long time after its establishment, a particular spot was marked out by the prince or general, to which all persons belonging to the victorious army were directed to bring every species of booty that might have fallen into their hands. This booty was not divided, or appropriated according to the will and pleasure of the prince or general, but was thrown into different lots, and drawn for in common. The soldiers who distributed these spoils were called *Butiniers*.

Butler Projectile. See PROJECTILE.

Butrinto. A fortified maritime town of European Turkey, opposite Corfu. The town and fortress are of Venetian construction; taken by the French from the Venetians in 1797.

Butt. In gunnery, is a solid earthen parapet, to fire against in the proving of guns, or in practice.

Butt, or Butt-end. That extremity of a musket which rests against the shoulder when the piece is brought up to a position of firing.

Button. In gunnery, is a part of the cascabel, in either a gun or howitzer, and is the hind part of the piece, made round in the form of a ball.

Buttress. A sustaining wall at right angles to the main wall, which it is intended to strengthen.

Buzar. A town in Bengal near which, on October 23, 1784, Major, afterwards Sir Hector, Munro (with 857 Europeans and 6215 Sepoys) gained a great victory over the troops of the nabob of Oude, 40,000 in number; 6000 of these were killed, and 180 pieces of cannon taken.

Byblos. An ancient town of Egypt, on the Delta of the Nile. Here the Athenians sustained a memorable siege against the Persians, 466 B.C.

Byrnie. Early English for body-armor.

Byssa. An ancient cannon for throwing stones.

Byzantium. See CONSTANTINOPLE.

C.

Cabas (*Fr.*). A basket made of rushes, used in ancient Languedoc and Rousillon, for the purpose of conveying stores and ammunition.

Cabasset, Cabacet, or Capacète. A kind of helmet, lighter than the morion, terminating in a rounded top. It was also called *Cervelière*, because it only covered the upper part of the head.

Cabeira (Asia Minor). Here Mithridates, king of Pontus, was defeated by Lucullus, 71 B.C.

Cabell Court-house. See BARBOURS-VILLE.

Cabazon de la Sal. A town of Spain, in the province of Valladolid. It is celebrated as the scene of one of the first battles of the Peninsular campaign, in which the Spaniards were signally defeated by the French.

Caboched, or Cabossed. A heraldic term from the old French word *caboché*, "head." When the head of an animal is borne without any part of the neck, and exhibited full in face, it is said to be *caboched*.

Cabrera. One of the Balearic Islands, 10 miles south of Majorca. Celebrated in the annals of war for the number of French prisoners who were there decimated by hunger, disease, and other physical and mental tortures.

Cabul, or Cabool. A city of Afghanistan, taken by Subuctajeen, grandfather of Mohammed, founder of the Gaznevide dynasty, and by Nâdir Shah in 1738. In 1809, the sovereign Shah Soojah was expelled by Futleh Khan; and in 1818, Cabul came into the hands of Dost Mohammed, a clever and ambitious chieftain. In 1839, the British restored Shah Soojah; but in November, 1841, a dreadful outbreak took place. The British civil officer, Sir William McNaughten, was massacred, and the British commenced a most disastrous retreat. Of about 8849 soldiers, and about 12,000 camp-followers, only one European, Dr. Dryden, and four or five natives escaped. In the same year (September 16), General, afterwards Sir George, Pollock retook the town, and rescued Lady Sale and many of the prisoners. After destroying many public buildings he left Cabul, October 12, 1842.

Cabule (*Fr.*). A machine of war, used during the 12th century to throw stones, etc.

Cache. A hidden reservoir of provision (to secure it from bears) in Arctic travel. Also, a deposit of dispatches, etc.

Cadence. A uniform time and pace in marching, indispensable to the correct movements of bodies of troops.

Cadency, Marks of. In heraldry, are marks on the shields of younger members of families, by which they are distinguished from the elder and from each other.

Cadet, Military (*Fr. cadet*, "younger," "junior"). Is a youth studying for the military service in a school established for military training, such as the Military Academy at West Point, N. Y., the Royal Military Academy at Woolwich, England, the Polytechnic School at Paris, etc. (See MILITARY ACADEMIES.) There are also medical and engineer cadets, who are youths undergoing special instruction for the public service in the several professions implied by their names.

Cadetship. The rank or commission of a cadet; as, to get a cadetship.

Cadiz (anc. *Gades*). A fortified maritime city of Spain, in the province of the same name. The Carthaginians became masters of Cadiz during the first Punic war, but the Romans obtained possession of it in 206 B.C. It was taken and pillaged by the Earl of Essex in 1596, and was blockaded in 1666 by Admiral Blake, who captured two rich galleons. It was besieged by the French from February, 1810, until August, 1812. Captured by the Duc d'Angoulême, October 8, 1828, and held till 1829; declared a free port in 1829.

Cadore. A town of Venice, 22 miles northeast from Belluno. This place stands on the Piave, and is distinguished as the birthplace of Titian. In 1797 the French obtained a victory over the Austrians near this town.

Caen. A city of France, in Normandy. A place of importance before 912, when it became the capital of the possessions of the Normans, under whom it flourished. It was taken by the English in 1346 and 1417; but was finally recovered by the French, July 1, 1450. Here were buried William the Conqueror (1087) and his queen (1083).

Caernarvon. A town in North Wales. In the castle (founded in 1283 or 1284) Edward II. was born, April 25, 1284; and the town was chartered by Edward I. in the same year. The town suffered by the civil war of Charles, but was finally retained for the Parliament.

Caffa, Kaffa, or Theodosia. A town in European Russia, in the Crimea, at the end of a large bay on the northern shore of the Black Sea. In 1770 the Russians took this place by assault, and in 1774 it was ceded with the rest of the Crimea to the khan of Tartary, who made it his residence.

Caffraria, and Caffre War. See **KAFFRARIA**.

Cahors. A town of France, capital of the department of Lot. It is supposed to have been the capital of the *Cadurca*, before the conquest of Gaul. It was captured by assault in 1580, by Henry IV.

Caic. See **CAIQUE**.

Caiffa. See **KAIFFA**.

Cai-fong. In China, capital of Honan, on the right bank of the Hoang-ho. It was besieged by 100,000 rebels in 1642. The commander of the relieving forces, in order to drown the enemy, broke down the embankments of the river. It is said all the besiegers and 800,000 of the citizens perished.

Cairo, or Grand Cairo. The modern capital of Egypt, partially built by the Saracens in 969; it is surrounded by stone walls which are surmounted with antique battlements; taken by the Turks from the Egyptian sultans, 1517; taken by the French under Napoleon Bonaparte; they entered the city July 28, 1798; captured by the British and Turks, when 6000 French capitulated, June 27, 1801; massacre of the Mamelukes, March 1, 1811.

Caisson. In gunnery, is a carriage used for conveying ammunition for a field battery. It is a four-wheeled carriage, consisting of two parts, one of which is a limber similar to that of a gun-carriage, and connected in a similar way by a wooden stock and lunette. On the axle-body of the rear part, and parallel to the stock, are placed three rails upon which are fastened two ammunition-boxes, one behind the other, and similar to the one on the limber; so that the caisson has three ammunition-boxes, which will seat nine cannoneers. The interior compartments of the ammunition-boxes vary according to the nature of the ammunition with which they are loaded. In the rear of the last box is placed a spare wheel-axle of iron, with a chain and toggle at the end of it. On the rear end of the middle rail is placed a carriage-hook similar to a pintle-hook, to which the lunette of a gun-carriage whose limber has become disabled may be attached, and the gun carried off the field. The caisson has the same turning capacity and mobility as the gun-carriage, so that it can follow the piece in all its manœuvres, if necessary. It also carries a spare wheel, spare pole, etc. See **ORDNANCE, CARRIAGES FOR, THE CAISSON**.

Cake-powder. See **GUNPOWDER**.

Caking. To prevent powder caking, the barrels should be taken outside the magazine and rolled on boards.

Calahozo. A town of Venezuela, South America; it was captured by Bolivar, 1820.

Calabria (anc. *Messapia*). A region of Southern Italy; it was conquered by the Romans 286 B.C. It formed part of the kingdom of the Ostrogoths under Theodoric, 493; was reconquered (for the Eastern empire) by Belisarius, 536; subdued by the Lombards and joined the duchy of Bene-

vento, 572. After various changes, it was conquered by Robert Guiscard, the Norman, 1058.

Calabuss. An early kind of light musket with a wheel-lock. Bourne mentions it in 1578.

Calagurris (now *Calahorra*, Spain). A town of the Vascones and a Roman municipium in Hispania Tarraconensis, near the Iberus (Ebro), memorable for its adherence to Sertorius and for its siege by Pompey and his generals (78 B.C.), in the course of which mothers killed and salted their children.

Calais. A fortified seaport town of France, department of Pas-de-Calais, on the Strait of Dover. The town and harbor are defended by a castle and several forts, and can be rendered inaccessible by land by flooding the adjacent ground, which is low and marshy. It was taken by Edward III. after a year's siege in August, 1347; retaken by the Duke of Guise, January, 1558. It was taken by the Spaniards, April, 1596; restored, 1598. Louis XVIII. landed here in 1814, after his exile.

Calasiries, or Calosires. One of the two divisions (the other being the *Hermotybi*) of the warrior-caste of Egypt. Their greatest strength was 250,000 men, and their chief abode in the western part of the Delta. They formed the king's body-guard.

Calatafimi. A town of Sicily, province of Trapani. Here, in May, 1860, Garibaldi defeated the royalist troops under Gen. Landi.

Calatañazor. A small town of Spain in Old Castile. Here Al-Mansoor gained a great victory over the Christians in 1001.

Calatayud. A town of Spain, province of Saragossa. It was captured from the Moors by Alfonso of Aragon in 1118; taken from the descendants of Alfonso by the king of Castile in 1362.

Calatrava, The Order of. Was founded in 1158 by Sancho III. of Castile. For a long period the war against the Moors was carried on almost entirely by the knights of Calatrava. The knights bear a cross gules, fleur-de-lis with green, etc.

Calcans. The bucklers of the Turks were so called during the Middle Ages.

Calcinato. A town of Italy, on the river Chiese. The Duke of Vendôme here defeated the Austrians under Count de Reventlau in 1706.

Calcium-light. A brilliant light produced by projecting the oxyhydrogen flame upon a surface of lime. Called also the Drummond-light.

Calcutta. Capital of Bengal and British India; the first settlement of the English here was made in 1689. The town was attacked and taken by an army of 70,000 horse and foot and 400 elephants (146 of the British were crammed into the "Black-Hole prison," a dungeon about 16 feet square, from whence 23 only came forth alive next day), June 20, 1756; it was retaken by Clive, January 2, 1757.

Caldiero. A village of Northern Italy. Here, just before the battle of Arcola, the French under Napoleon I. were repulsed by the Austrians under Alvinzi in 1796, and in 1805 were beaten under Masséna by the Archduke Charles.

Caledonia. The name given by the Romans to that part of Britain north of the Wall of Antoninus, and afterwards applied to the whole of the country now known as Scotland. The inhabitants were called Caledonii until about the beginning of the 4th century, when they began to be spoken of as Picts and Scots. In 84 they were defeated under their chief Galgacus by the Roman general Agricola, and a great part of the country was overrun by the Romans, who formed many encampments there; but the country was never reduced to a Roman province.

Caliano. A town of the Tyrol, Austria, on the left bank of the Adige. Here the Venetians were defeated by the Austrians in 1487.

Caliber, or Calibre. From the Latin *quælibet*, "what pound," applied first to the weight of a bullet, then to the diameter, which determined the diameter of the gun, now signifies the diameter of the bore of a cannon or any fire-arm, and is expressed in inches or fractional parts of an inch, as a 16-inch gun; a Springfield rifle, caliber .45. Cannon are sometimes also designated by the weight of metal which they throw, as a 24-pounder.

Caliber-rule. A gunner's calipers; having two scales, to determine the weight of a ball from its diameter, and conversely.

Calicut (now Kōlikod). A town in South-western India; the first Indian port visited by Vasco de Gama, May 20, 1498. It was seized by Hyder Ali, 1766, and taken by the English, 1790.

California (from the Spanish *Caliente Fornalla*, "hot furnace," in allusion to the climate). Was discovered by Cortez in 1537; others say Cabrillo in 1542; and visited by Sir Francis Drake, who named it New Albion in 1579. The Spaniards established missionary and military stations in California, 1698; it became subject to Mexico in 1823; became independent in 1836; occupied by the army of the United States in 1846; ceded to the United States, 1848; admitted into the Union as a sovereign State, 1850.

Caligæ. A kind of half-boots worn by the Roman soldiers. These soldiers were sometimes called *Caligati*.

Caliper-compass. An instrument by which the bore of cannon, small-arms, etc., is measured; said to have been invented by an artificer of Nuremberg, 1540.

Caliver. A hand-gun or arquebuse; probably the old name for the match-lock or carbine.

Call. A military musical term, signifies a signal given by a trumpet, bugle, or drum.

Callao. A fortified seaport of Peru. Lord Cochrane gallantly cut out the "Esmeralda," a Spanish ship-of-war, from under

the guns of the fort in 1821. Its roadstead (the best on the Peruvian coast) was the scene of a combat between the Spaniards and the Independents; the Colombians took it in 1826. The attempt of the Spanish admiral Nuñez to bombard Callao on May 2, 1866, was defeated by the Peruvians.

Calle, La. A seaport on the coast of Algeria. The French, who possessed it before the revolution of 1789, lost it during that epoch; again occupied it in 1815, but lost it in 1827. It has been in the possession of the French since the conquest of Algeria.

Callinger. One of the hill-forts of Bundelcund. From its position and size, Callinger must at one time have been a place of great strength. It was stormed by the British in 1812.

Calmar. See KALMAR.

Calones. A term applied to menials of the Roman armies; also slaves belonging to the Roman soldiers, who followed their masters to the wars.

Calore. A river in Italy; on its banks the Romans (composed of slaves), commanded by Tiberius (Gracchus), defeated the Carthaginian general Hanno in 215. After the battle each Roman (slave) who could present the head of an enemy slain by him was granted his freedom.

Calpee, or Kalpee. A city of India, in Bundelcund, on the right bank of the river Jumna. It was conquered by the British in 1808, and in May, 1858, was captured by Gen. Rose from the mutinous Sepoys, it being the headquarters of the Gwalior contingent.

Caltrop, or Crow's-foot. An instrument with 4 iron points, so disposed that, three of them being on the ground, the other projects upward. They are scattered on the ground where an enemy's cavalry are to pass, to impede their progress by endangering the horses' feet.

Calumet. A kind of pipe used by the North American Indians for smoking tobacco, having the bowl usually of soft red stone, and the tube a long reed ornamented with feathers. The calumet is used as a symbol or instrument of peace. To accept the calumet is to agree to the terms of peace, and to refuse it is to reject them. The calumet is used to seal or ratify contracts and alliances, and to receive strangers kindly.

Calvi. A seaport on the island of Corsica, situated on a peninsula in the Gulf of Calvi. It is strongly fortified and has a good port. It was captured by the English in 1794, after a siege of 51 days.

Calvi. A decayed town of Naples. Here the French gained a victory over the Neapolitans, December 9, 1798.

Cam. A river in England. On its banks was fought a battle between the Saxons and Danes during the reign of Edward I.

Camail. Ancient armor, consisting of a guard for the throat made of chain-mail coming down from the helmet.

Cambrai, or Cambray. A fortified city

of France, department of the North. It was fortified by the Romans; besieged and captured by Childebert in 535; taken by Edward III., king of England, in 1337; in 1544 by Charles V.; by the Spaniards in 1595; captured by the French and annexed, 1667; taken by Clairfait, the Austrian general, on September 10, 1798. The French were defeated at Cæsar's camp, in the neighborhood, by the allied army under the Duke of York, April 24, 1794. Cambray was seized by the British under Sir Charles Colville, June 24, 1815. Several important treaties were entered into at this place.

Cambria. See WALES.

Cambridge. The Roman *Camboricum* and the Saxon *Granta*; a town of England, in Cambridgeshire. It was burned by the Danes in 870 and 1010. Roger de Montgomery destroyed it with fire and sword, to be revenged of King William Rufus. During Wat Tyler's and Jack Straw's rebellion, the rebels entered the town, seized the University records and burned them in the market-place, 1381.

Cambuskenneth (Central Scotland). Here Wallace defeated the English under Warrenne and Cressingham, September 10, 1297.

Camden. A village in Kershaw Co., S. C. Gen. Gates was defeated here August 16, 1780, by Lord Cornwallis, and April 25, 1781, Gen. Greene was here defeated by Lord Rawdon. During the civil war this place was captured, February 24, 1865, by the Federal forces under Gen. Sherman, and the bridge over the Wateree, the railroad depot, and a considerable quantity of stores, etc., burned by the 15th Corps.

Camel. See PACK AND DRAUGHT ANIMALS.

Camelford. A town of England, in Cornwall. It was the scene of a famous battle between King Arthur and his nephew Mordred in 543, in which the former was victorious. The West Saxons, under Egbert, had a battle with the Britons here in 823.

Cameron Highlanders. The designation given to the 79th Regiment of Infantry in the British service, in consequence of the corps having been raised by Allan Cameron of Erroch in 1798. This gallant regiment, which wears the Highland garb, performed distinguished services in the Peninsula and at Waterloo, and has been engaged in the principal warlike struggles of more recent times.

Camisado. A shirt formerly worn by soldiers over their uniform, in order to be able to recognize one another in the darkness, in a night attack.

Camisado. An attack by surprise at night, or at break of day, when the enemy is supposed to be in bed, by soldiers wearing the *camisado*.

Camouflet (*Fr.*). A small mine containing about 10 pounds of powder, sufficient to compress the earth all around it without disturbing the surface of the ground. It is sometimes formed in the wall or side of an

enemy's gallery, to blow in the earth and cut off the retreat of the miner.

Camp. From the Latin word *campus*, a "plain"; is the whole extent of ground covered by an army when under canvas. Its breadth should not exceed the line occupied by the troops when drawn out in order of battle. As a general rule, camps should be located in a position convenient to wood and water, with the front close and well covered, and the rear perfectly open.

Campaign. A connected series of military operations, forming a distinct stage or step in a war. Formerly, when troops kept the field only during the summer months, the term was used to include all that was done from the time an army took the field until it went again into winter quarters. In modern times, when no ordinary degree of cold is allowed to arrest military operations, the term is frequently used to include all steps taken to accomplish one immediate object.

Campaigner. One who has served in an army several campaigns; an old soldier; a veteran.

Camp and Garrison Equipage. All the tents, fittings, utensils, etc., carried with an army, applicable to the domestic rather than to the warlike wants of the soldier. The allowance of camp and garrison equipage to U. S. troops is prescribed in general orders from the War Department.

Campania (Southern Italy). Was occupied by Hannibal and various cities declared in his favor, 216 B.C.; conquered by the Romans, 213. Its capital was Capua (which see).

Camp-bedstead. A bedstead made to fold up within a narrow space, as used in war; a trestle bedstead.

Campbell's Station. A post-village of Knox Co., Tenn. Here on November 16, 1863, Gen. Burnside, marching from Knoxville to meet the Confederate forces under Gen. Longstreet, was attacked by them, and after several hours' fighting succeeded in repulsing them. Burnside then withdrew to the neighborhood of Knoxville and fortified his position.

Camp-boy. A boy that serves in camp.

Campeachy. A city of Central America, and the principal seaport of Yucatan. The country was discovered about 1517, and settled in 1540. This city was taken by the English in 1659; by the buccaneers in 1678, and by the freebooters of St. Domingo in 1685. These last burnt the town and blew up the citadel.

Campestre. A kind of girdle or apron worn by Roman soldiers around their waists at certain exercises, where the rest of their bodies remained naked.

Camp-followers. The sutlers, traders, and dealers generally; also civilian employes, servants, and women who follow troops, and are amenable to the regulations and restrictions of the service.

Camp-guard. A camp-guard consists of

one or two rows of sentinels placed around a camp, and relieved at regular intervals. The number of rows of sentinels, and the distance between each man, will depend upon the character of the ground and the degree of danger apprehended.

Campidoctores. Officers who drilled the Roman soldiery.

Camp, Intrenched. Is a position fortified by field-works, which may be selected by an army in the field, for important operations during a campaign or a war,—such as to secure itself while covering a siege, or in winter quarters to accommodate a corps of observation, while the active army is engaged elsewhere, or to defend a position near a fortified place.

Camp of Instruction. Is an encampment of troops in the field to habituate them to the duties and fatigues of war. They may be either temporary or permanent. Of the latter description are the camps at Aldershot, England, and the Curragh of Kildare, Ireland.

Campo Formio. A town of Northern Italy; here a treaty was concluded between France and Austria, the latter yielding the Low Countries and the Ionian Islands to France, and Milan, Mantua, and Modena to the Cisalpine Republic, October 17, 1797. By a secret article the emperor gained the Venetian dominions.

Campo Mayor. A stronghold which covers the district between the Guadiana and the Tagus, where the French, retreating from this place in March, 1811, were suddenly confronted by a large British force under Marshal Beresford, and a combat ensued which was disastrous to the French.

Campoos. Regiments of infantry in the service of the Mahratta confederates.

Campo Santo. A town of Northern Italy, situated on the Panaro. In 1743 a sanguinary battle was fought here between the Spanish and Austrian forces.

Camp Out, To. To rest for the night without a standing roof; whether under a light tent, a screen of boughs, or any makeshift that the neighborhood may afford.

Camprodon. A fortified town of Catalonia, Spain. This town was taken by the French in 1689, and again in 1794.

Camp-stool. A portable seat used on campaigns. It is usually made with crossed legs, so as to fold up, and with a full-sized seat of leather or canvas, or else of strips of dressed hide.

Canada, Dominion of. A country of North America which embraces all of the American possessions of Great Britain lying north of the United States. It was discovered by John and Sebastian Cabot, June 24, 1497; the French founded Quebec in 1608. The English general Wolfe captured Quebec in 1759, and the conquest of Canada was completed in 1760. The Americans under Montgomery invaded Canada, and surprised Montreal, November, 1775; expelled by Carleton, March, 1776; the Americans under

Gen. Hull again invaded Canada; defeated at Brownstown, August 8, and surrendered August 16, 1812. The Americans took York April 27, Fort George May 27, 1814; they were defeated at Chippewa July 25, and peace was signed at Ghent, December 24, 1814. Several rebellions took place in Canada, but were speedily suppressed. Invasions of Canada by armed Fenians from the United States were attempted in 1866 and 1870, but were repelled without difficulty.

Cananore. A seaport town of British India, in the presidency of Madras; it is the chief military station of the British in Malabar. In 1501 a small fort was built here by the Portuguese, which was taken by the Dutch in 1664. These were subsequently driven out by Tippoo Saib, and in 1790 the British took possession.

Candahar, or Kandahar. A fortified city of Afghanistan; stands in a fertile plain, 200 miles southwest from Cabool. This city is supposed to have been founded by Alexander the Great. Candahar was held by Tartary, India, and Persia in turn. During all the disasters of the Afghan war, the British succeeded in holding possession of the city, 1839-42.

Candia (anc. Crete). An island in the Mediterranean Sea. It was conquered by the Romans, 68 B.C.; seized by the Saracens, 823; retaken by the Greeks, 960; sold to the Venetians, 1204; gained by the Turks after a 24 years' siege, during which more than 200,000 men perished, 1669; ceded to the Egyptian pasha, 1830; restored to Turkey, 1840; in 1866 the Christian inhabitants revolted against the Turks, and demanded an annexation to the kingdom of Greece. This war excited much sympathy among Christian nations, but the Cretans were subdued in 1869.

Candle Bombs. Pasteboard shells filled with pyrotechnic compositions which make a brilliant display upon explosion. They are used for signaling, and are made up with a powder charge attached to one side; a strand of quick-match leads to the charge when placed in the mortar. The mortars used are very light, being simply hollow cylinders of stout paper, sole-leather, or wood. They are made very light for ease of transportation.

Candy. A kingdom of Ceylon; it was taken by a British detachment, February 20, 1803, who capitulated June 23, following, anxious to evacuate the place on account of its unhealthiness; on the third day many were treacherously massacred at Columbo. The war was renewed in October, 1814; the king made prisoner by Gen. Brownrigg, February 19, 1815, and the sovereignty vested in Great Britain, March 2, 1815.

Canister. In the U. S. service, a round of canister consists of a hollow tin cylinder filled with cast iron or lead balls, which vary in size and number with the caliber and kind of piece; the cylinder is closed at the

bottom by a thick cast-iron plate, and at the top by one of sheet-iron. The interstices between the balls are filled with dry sawdust, the object of which is to give more solidity to the mass, and to prevent the balls from crowding on one another when the piece is fired. In the English service this is called case-shot.

Canister-shot. One of the lead or iron balls in a round of canister.

Cannæ. A town of Naples, province of Terra di Bari. It is celebrated for the great victory gained there by Hannibal over the Romans, in the summer of 216 B.C. The loss of the Romans is stated by Livy at 45,000 infantry and 8000 cavalry.

Cannon. A military engine of which the general form is that of a hollow cylinder closed at one end, and variously mounted, used for throwing balls and other instruments of death by force of gunpowder. Cannons are made of iron, brass, bronze, and sometimes of steel rods welded together, and are of different sizes. They are classified, from their nature, *guns, howitzers, and mortars*; also from their use, as *field, mountain, prairie, sea-coast, and siege*; also as *rifled and smooth-bore*. See **ORDNANCE**.

The following are the most famous cannon of all ages, arranged according to the diameter of the bore:

1. The *Tsar Pooschka*, the great bronze gun of Moscow, cast in 1586; bore 36 inches, weight 86,240 pounds; threw a stone ball weighing 2000 pounds.

2. *Mallet's Mortar*, English, 1857-58; built up of cast and wrought iron; bore 36 inches; cast-iron shell weighing 2986 pounds.

3. The *Malik-I-Mydan*, "Master of the Field," the great bronze gun of Bejapoor, India; cast 1588; bore 28.5 inches; basalt ball, 1000 pounds.

4. The *Bronze Gun of Mahomet II.*, A.D. 1464; bore 25 inches; granite ball, 672 pounds.

5. The *Dulle-Griete* of Ghent, wrought iron, A.D. 1430; bore 25 inches; stone ball, 700 pounds.

6. The *Dhool-Dhanee*, bronze gun of Agra, India; bore 23.2 inches; stone balls, 520 pounds.

7. *Mons Meg* of Edinburgh; wrought iron, A.D. 1455; bore 20 inches; stone ball, 400 pounds.

8. *Rodman Gun*, American, 1863; cast iron; bore 20 inches, weight 117,000 pounds; cast-iron solid shot weighing 1080 pounds.

The most powerful cannon the world has ever seen have been made within the present decade (1870-80). They are rifles.

The 100-ton *Armstrong guns* sold to Italy to arm the "Duilio" and "Dandolo"; bore 17 inches, weight of oblong shot of chilled iron 2000 pounds, charge of *Fossano powder* 552 pounds. *Muzzle-loading*.

The 80-ton *Woolwich guns* made to arm the "Infexible"; bore 16 inches, weight of shot 1700 pounds, charge of *cubical powder* 440 pounds. *Muzzle-loading*.

The 72-ton *Krupp guns*; bore 15.75 inches, weight of steel shot 1700 pounds, charge of *prismatic powder* 452 pounds. Guns all steel. *Breech-loading*.

Cannonade. The act of discharging shot or shells from cannon for the purpose of destroying an army, or battering a town, ship, or fort; usually applied to an attack of some continuance.

Cannon-ball. A ball usually made of cast iron, to be thrown from cannon.

Cannon Baskets. The old English phrase for gabions.

Cannon-bullet. A cannon-ball.

Cannoneer. A man who manages cannon.

Cannoneering. The use of cannon.

Cannoneers' Seats. See **ORDNANCE, CARRIAGES FOR, NOMENCLATURE OF ARTILLERY CARRIAGES**.

Cannon-lock. A contrivance, like the lock of a gun, placed over the vent of a cannon to explode the charge.

Cannon-metal. An alloy of copper with about 9 per cent. of tin;—called also *gun-metal*.

Cannon-perer. An ancient piece of ordnance throwing stone shot.

Cannon-proof. Proof against cannon.

Cannon Royal. A 60-pounder of 8½ inches bore.

Cannonry. Cannon collectively; artillery.

Cannon-shot. A ball for cannon.

Canonnière (Fr.). This name was given formerly to a tent which served to shelter four canoniers, but later the term was applied to all infantry tents which contained seven or eight men.

Canonnière (Fr.). An appellation formerly given to a gun-proof tower; it also designated an opening in the walls of cities, forts, etc., through which the defenders of these places could fire on an enemy without being exposed.

Canoniers (Fr.). Artillerymen, gunners. In 1671, during the administration of Louvois in France, the name of *canonniers* was given to the first company of the regiment of the king's fusileers; in April, 1698, this regiment was named *artillerie royale*, but the first company retained the name of *canonniers*.

Canoniers Gardes-côtes (Fr.). Were instituted in 1702, by Louis XIV. of France, for the service of coast batteries. They are similar to the Artillery Coast Brigade in the British service.

Canstadt, or Cannstadt. A town of Würtemberg, on the river Neckar. In the vicinity a battle was fought in 1796, between Gen. Moreau and the Archduke Charles of Austria.

Cantabri. A rude race of ancient mountaineers who lived in Cantabria, the northern part of Spain, near the Bay of Biscay. They made a brave resistance to the Romans in the Cantabrian war, 25-19 B.C. They are said to have been of Iberian origin.

Cantabrum. A large banner used during

the time of the Roman emperors, and borne on festive occasions.

Canteen. A tin vessel used by soldiers to carry water on the march, or in the field. It is usually suspended by a strap from the shoulder. In the British service the canteen is made of wood. The name is also applied to the store authorized within the precincts of British barracks for the sale of liquors, small stores, etc. (See *POST-TRADER*.) A leather or wooden chest divided into compartments, and containing the table equipage of an officer when on active service, is also called a canteen.

Canterbury (the *Durovernum* of the Romans). A town in Kent, England. Its cathedral was sacked by the Danes, 1011, and burnt down, 1067; rebuilt, 1180; again burnt down, 1174, and again rebuilt. During the civil war in England, Cromwell's dragoons used Canterbury Cathedral as a stable.

Cantinière (*Fr.*). Women who are authorized to establish themselves in the barracks or follow the troops in time of war, selling them liquors and provisions. The *cantinières*, whether attached to regiments or barracks, are selected from the wives of non-commissioned officers or privates, and wear a uniform. See *VIVANDIÈRE*.

Cantle. The hind-bow or protuberance of a saddle; also written *cantel*.

Canton. The only city in China with which Europeans were allowed to trade till the treaty of August 29, 1842. In 1856 a serious misunderstanding arose between Great Britain and China, on account of the Chinese having boarded the "Arrow," a small vessel, lying in the Canton River, with a British colonial register. The Canton forts were taken, and Canton was bombarded by Sir Michael Seymour in 1856, and in the following year the Chinese fleet was entirely destroyed. In 1858 Canton was taken, and the forts at the mouth of the Pei-ho River were taken by the allied French and English forces.

Canton. One of the nine honorable ordinaries in heraldry. It occupies a corner of the shield either dexter or sinister, and is a third of the chief.

Cantonments. In the general operations of European armies are temporary resting-places. In cantonments the men are not under canvas, as in camps, but occupy during an armistice, or in intervals between active operations, adjacent towns and villages. In India cantonments are permanent places, being regular military towns, distinct and at some little distances from the principal cities.

Cantonné. In heraldry, when a cross is placed between four other objects it is said to be *cantonné*.

Canusium (now *Canosa*). An important and very ancient city of Apulia, in Italy. It was probably founded by the Greeks. Here a battle took place between the Carthaginians under Hannibal, and the Romans under Marcellus, 209 B.C.; it lasted two

days; the first day the Carthaginians were victorious, but on the second day the Romans gained the victory after committing great havoc among their adversaries. It was captured by the Romans, 318 B.C.

Canvas. A coarse hempen or linen cloth which is extensively used in the form of tents, etc.

Cap-a-pie (*Fr.*). "Head to foot." In military language of the Middle Ages, this term was applied to a knight or soldier armed at all points, with armor for defense and weapons for attack.

Caparison. The bridle, saddle, and housing of a military horse.

Cape Breton. A large island of British North America, separated from Nova Scotia by the Gut of Canso. Said to have been discovered by Cabot, 1497; by the English in 1584; taken by the French in 1682, but was afterwards restored, and again taken in 1745, and retaken in 1748. The fortress of Louisbourg was captured by the English, July 26, 1758, when the garrison were made prisoners, and 11 French ships were captured or destroyed. The island was ceded to England, February 10, 1763.

Cape Coast Castle. In Southwest Africa; it was settled by the Portuguese in 1610, but it soon fell to the Dutch; it was demolished by Admiral Holmes in 1661. All the British factories and shipping along the coast were destroyed by the Dutch admiral, Ruyter, in 1665. It was confirmed to the English by the treaty of Breda, in 1667. See *ASHANTEES*.

Cape Colony. See *CAPE OF GOOD HOPE*.

Capeline (*Fr.*). A helmet without a visor, nearly in the form of a round head; it was formerly worn by infantry.

Cape of Good Hope. In Southern Africa; long held by the Dutch; was captured by the British, September 16, 1795; restored to the Dutch at the general peace, but was again taken by the British, January 9, 1806; it still belongs to the British, though a severe desultory warfare has often been carried on with the native tribes.

Capital. In technical fortification, is an imaginary line bisecting the salient angle of a work.

Capitulation. The surrender of a fortress or army on stipulated conditions.

Caponiere. A covered passage across the ditch of a fortified place, for the purpose either of sheltering communication with outworks or of affording a flanking fire to the ditch in which it stands. If the caponiere is protected only on one side, it is single; if on both sides, and covered, it is double.

Capote. A heavy coat with a hood, worn by soldiers, sailors, and others.

Cappadocia. An ancient province of Asia Minor, now included in Asiatic Turkey. It was conquered by Cyrus the Great of Persia, and was ruled by independent kings after the time of Alexander the Great until 17, when Tiberius reduced it to a Roman province.

Cappel. A village of Switzerland. Here the reformer Ulric Zwinglius was slain in a conflict between the Catholics and the men of Zurich, in October, 1531.

Capri (anc. *Capreae*). An island near Naples, the sumptuous residence of Tiberius, memorable for the debaucheries he committed during the last seven years of his life. Capri was taken by Sir Sidney Smith, April 22, 1806; taken from the British, October 4, 1808, by a French force under Gen. Lamarque.

Caps. The head-dress or shako of such troops as are not supplied with helmets.

FORAGE CAPS are the cloth undress head-covering of the officer or soldier.

Caps. In gunnery, are the leathern plugs, or bungs, used to prevent rain or rubbish from collecting in the bore of the guns and howitzers. There are also cannon caps for similar purposes, used for mortars.

Caps, Percussion-. Are small metal covers, inlaid with detonating powder, and placed on the nipple of a rifle or revolver. The hammer, striking on the outer surface of the cap, causes the powder to explode and ignite the charge.

Cap-square. A strong plate of iron which comes over the trunnion of a cannon, and keeps it to its place.

Capstan. A strong, massy column of timber, formed somewhat like a truncated cone, and having its upper extremity pierced to receive bars, or levers, for winding a rope round it, to move great weights, or to exert great power; used in moving heavy guns considerable distances; called also a *crab*.

Capsules. Copper caps for percussion-locks.

Captain. In a limited and technical sense, is the title of an officer who commands a troop of cavalry, a company of infantry, or a battery of artillery. He is the next in rank below a major, and in the U. S. army is responsible for the camp and garrison equipage, the arms, ammunition, and clothing of his company.

There is no position in the army that will give as much satisfaction in return for an honest, capable, and conscientious discharge of his duty as that of captain or commanding officer of a company. There is a reward in having done his full duty to his company, that no disappointment of distinction, no failure can deprive him of; his seniors may overlook him in giving credits, unfortunate circumstances may defeat his fondest hopes, and the crown of laurel may never rest upon his brow, but the reward that follows upon the faithful discharge of his duty to his company he cannot be deprived of by any disaster, neglect, or injustice.

He receives it whenever he looks upon his little command, and sees the harmony, comfort, and discipline that prevail; he feels it when he comes to part with his men in the due course of promotion, or as they individually take their discharge after a faithful service; he remembers it when, in after-

years, no matter if rank and honors have in the mean time fallen upon him, he meets an old soldier who, with respect and affection, still calls him his captain.

He is a small sovereign, powerful and great within his little domain, but no imbecile monarch ever suffered more from intrigues, factions, and encroachments than an incapable company commander; no tyrant king must contend more with rebellions, insurrections, and defections than an arbitrary and unjust captain, and no wise and beneficent ruler ever derived more heartfelt homage, more faithful services, or more patriotic devotion than a just, competent, and faithful commander receives from his company. They will love him truly, they will obey him faithfully, and whilst there is life they will stand by him in the hour of battle.

The command of a company divides itself into two kinds of duty, requiring very different capacity, viz., *Government* and *Administration*. The former requires force of character, judgment, and discretion, and has often been well performed without much capacity for the latter. Administration requires a certain amount of knowledge absolutely indispensable to a discharge of a duty.

Government.—Under this head may be included instruction in tactics and discipline, the preservation of order and subordination, and the cultivation of a military spirit and pride in the profession among the men. It involves the appointing and reduction of non-commissioned officers, and the subject of rewards and punishments.

Administration.—Providing the clothing and subsistence, and keeping the accounts of soldiers in order, that they may be paid, and attending to the transportation of the men and their supplies, belong under this head. They involve the keeping of the records of the company, and the pay and clothing accounts of the men; the drawing and distributing of supplies, and the care and accountability of public and company property. The efficient administration of the affairs of a company greatly facilitates the discipline and government of the company, makes the men content and cheerful in the performance of their duties, and attaches them to their commander.

Captaincy. The rank, post, or commission of a captain.

Captaincy-general. The office, power, territory, or jurisdiction of a captain-general.

Captain-General. This was the proper appellation of a commander-in-chief till Marlborough's time, if not later. The rank is sometimes still given on extraordinary occasions. It was born by the Marquis of Wellesley during his government in India, and is applied to the governor-general of the Canadas. In the United States, the governor of a State is captain-general of the militia. *Captain-lieutenant*, an officer, who

with the rank of a captain, and pay of lieutenant, commands a company or troop.

Captainry. The power, or command, over a certain district; chieftainship; captainship.

Captainship. The condition, rank, post, or authority of a captain or chief commander. Also skill in military affairs; as, to show good captainship.

Captive. A prisoner taken by force or stratagem in war, by an enemy; made prisoner, especially in war; kept in bondage or confinement.

Captivity. The state of being a prisoner, or of being in the power of the enemy, by force or the fate of war.

Captor. One who takes, as a prisoner or a prize.

Capture. The act of taking or seizing by force; seizure; arrest; as, the capture of an enemy. The thing taken; a prize; prey taken by force, surprise, or stratagem.

Captured Property. As civilization has advanced during the last centuries, so has likewise steadily advanced, especially in war on land, the distinction between the private individual belonging to a hostile country and the hostile country itself, with its men in arms. The principle has been more and more acknowledged that the unarmed citizen is to be spared in person, property, and honor, as much as the exigencies of war will admit. A victorious army appropriates all public money, seizes all public movable property until further direction by its government, and sequesters for its own benefit or that of its government all the revenues of real property belonging to the hostile government or nation. The title to such real property remains in abeyance during military occupation, and until the conquest is made complete. As a general rule, the property belonging to churches, to hospitals, or other establishments of an exclusively charitable nature, to establishments of education, or foundations for the promotion of knowledge, whether public schools, universities, academies of learning, or observatories, museums of the fine arts, or of a scientific character,—such property is not to be considered public property; but it may be taxed or used when the public service may require it. Classical works of art, libraries, scientific collections, or precious instruments, such as astronomical telescopes, as well as hospitals, must be secured against all avoidable injury, even when they are contained in fortified places whilst besieged or bombarded. And if they can be removed without injury, the ruler of the conquering state or nation may order them to be seized and removed for the benefit of the said nation. The ultimate ownership is to be settled by the ensuing treaty of peace.

The United States acknowledge and protect, in hostile countries occupied by them, religion and morality; strictly private property; the persons of the inhabitants, especially those of women; and the sacredness

of domestic relations. Offenses to the contrary are rigorously punished. This does not interfere with the right of the victorious invader to tax the people or their property, to levy forced loans, to billet soldiers, or to appropriate property, especially houses, land, boats or ships, and churches for temporary and military uses. Private property can be seized only by way of military necessity, except the owner forfeits his right to it by committing a crime or offense against the victorious power. All captures and booty belong, according to the modern law of war, primarily to the government of the captor. See **STORES, MILITARY.**

Capua. A town of Naples, in the province of Terra di Lavoro; took the part of Hannibal when his army wintered here after the battle of Cannæ, 216 B.C., and, it is said, became enervated through luxury. In 211, when the Romans retook the city, they scourged and beheaded all the surviving senators; many of them having poisoned themselves after a banquet previous to the surrender of the city. During the Middle Ages, Capua was successively subjugated by the Greeks, Saracens, Normans, and Germans. It was restored to Naples in 1424, and was taken, November 2, 1860, by Garibaldi.

Capuchons (Fr.). A society formed in France from 1181 to 1183, for the suppression of the brigandage of the *Routiers*; they exterminated 7000 brigands in an engagement near Verdun.

Caracas (South America). Part of Venezuela, discovered by Columbus in 1498. It was reduced by arms, and assigned as property to the Welsers, German merchants, by Charles V.; but for their tyranny they were dispossessed in 1550, and a crown governor appointed. The province declared its independence, May 9, 1810.

Caracole (Sp. *caracol*). A French term used in horsemanship or the manège to denote a semi-round or half-turn. When cavalry advance to charge in battle they sometimes perform caracoles in order to perplex the enemy, and excite a doubt whether they will attack the flank or the front.

Caravaggio. A walled town of Italy, in the province of Bergamo. Here a battle was fought, September 16, 1448, between the Milanese and Venetians, in which the latter were defeated.

Carberry Hill. In Southern Scotland; here on June 16, 1567, Lord Hume and the confederate barons dispersed the royal army under Bothwell, and took Mary, queen of Scots, prisoner. Bothwell fled.

Carbine. A short light musket, used by cavalry. It is so called from a kind of light horse (Carabins), whose weapon it was. They were employed by Henry II. of France in 1559.

Carbineers, or Carabineers. Dragoons armed with carbines, who occasionally acted as infantry. All regiments of light-armed horse were formerly called carbineers; but

since the establishment of hussars and lancers, they have, for the most part, lost that denomination.

Carbon. See CHARCOAL.

Carcass. In gunnery, is a spherical shell having three additional holes, of the same dimensions as the fuze-hole, pierced at equal distances apart in the upper hemisphere of the shell, and filled with a composition which burns with intense power from 8 to 10 minutes, and the flame issuing from the holes sets fire to everything combustible within its reach; it is used in bombardments, setting fire to shipping, etc., and is projected from cannon like a cannon-shell.

Carcassonne (anc. *Carcaso*). A city in the south of France, capital of the department of Aude. It was taken from the Visigoths by the Saracens in 724.

Carchera. A name given by the Corsicans to their cartridge-belts.

Cardiff. A seaport and county town of Wales, in Glamorganshire. Cardiff is an ancient place, and is surrounded by walls, in which were four gates. Its castle, once large and strongly fortified, was erected about the year 1079. Robert, duke of Normandy, was confined in it for 28 years after the battle of Tinchebra. This fortress was afterwards taken and partially destroyed by Cromwell.

Cardigan. A town in Cardiganshire, Wales. It was an important town about the Norman conquest, and the Normans were frequently defeated before mastering it. The town suffered much in the struggles between the Welsh and the Normans.

Cardinal Points. The four intersections of the horizon with the meridian, and the prime vertical circle, or north and south, east and west. In astrology, the cardinal points are the rising and setting of the sun, the zenith and nadir.

Caria. An ancient province in the extreme southwest of Asia Minor. It was conquered by Cyrus, 546 B.C.; by Dercyllidas, a Lacedæmonian, 397. Caria was absorbed in the Turkish empire.

Carignan. A small town about 12 miles from Sedan, department of Ardennes, North-east France. At the plain Douzy, near this place and the encampment of Vaux, a part of MacMahon's army, retreating before the Germans, turned round and made a stand, August 31, 1870. After a long and severe engagement, in which the positions were taken and retaken several times, the Germans turned the flank of their enemies, who were compelled to fall back upon Sedan, where they were finally overcome, September 1.

Caripi. A kind of cavalry in the Turkish army, which, to the number of 1000, are not slaves, nor bred up in the seraglio, like the rest, but are generally Moors, or renegade Christians, who have obtained the rank of horse-guards to the Grand Seignior.

Carisbrooke Castle. In the Isle of Wight, England; it is said to have been a British and Roman fortress; was taken in

530, by Cerdic, founder of the kingdom of the West Saxons. Here Charles I. was imprisoned in 1647.

Carismians. Were fierce shepherds living near the Caspian Sea; having been expelled by the Tartars, they invaded Syria in 1248. The union of the sultans of Aleppo, Hems, and Damascus was insufficient to stem the torrent, and the Christian military orders were nearly exterminated in a single battle in 1244. In October they took Jerusalem. They were totally defeated in 1247.

Carlaverock Castle. In Southern Scotland; it was taken by Edward I. in July, 1800.

Carlisle. A frontier town of England, in the county of Cumberland, wherein for many ages a strong garrison was kept. Just below this town the famous Picts' wall began, which crossed the whole island to Newcastle-upon-Tyne, and here also ended the great Roman highway. The castle was destroyed by the Danes, 875, restored in 1092 by William II.; was the prison of Mary, queen of Scots, in 1568. Taken by the Parliamentary forces, in 1645, and by the young Pretender, November 15, 1745; retaken by the Duke of Cumberland, December 30, same year. The cathedral was almost ruined by Cromwell in 1648.

Carlisle. Capital of Cumberland Co., Pa. This town was shelled by the Confederates, July, 1863.

Carlow. A town in Southeastern Ireland; the castle, erected by King John, surrendered after a desperate siege to Rory Oge O'Moore, in 1577; again to the Parliamentary forces in 1650. Here the royal troops routed the insurgents, May, 1798.

Carlowitz, or Karlowitz. A town of the Austrian empire, on the Danube. Here, in 1699, a treaty was concluded between Turkey and Austria; and here Prince Eugène defeated the Turks in 1716.

Carlsruhe, or Karlsruhe. Capital of the grand duchy of Baden; built by the Margrave Charles William, 1715. It was occupied by the Prussians, June 25, 1849, who aided to suppress the revolution, and enabled the grand duke to return, August 18, 1849.

Carmagnola. A town of Piedmont, on the river Po. It was captured by Catinat troops in 1691; taken by the French Republican troops in 1795.

Carmel, Knights of the Order of Our Lady of Mount. A semi-religious order of knighthood instituted by Henry IV. of France, and incorporated with the order of the Knights of St. Lazarus of Jerusalem. The order consisted of 100 gentlemen, all French, who were to attend the king in his wars, and had considerable revenues assigned them.

Carnatic. A district of Southern Hindostan, extending along the whole coast of Coromandel. Hyder Ali entered the Carnatic with 80,000 troops in 1780, and was defeated by the British under Sir Eyre Coote, July 1 and August 27, 1781, and decisively over-

thrown, June 2, 1782. The Carnatic was overrun by Tippoo in 1790. The British have possessed entire authority over the Carnatic since 1801.

Carnifex Ferry. Over the Gauley River, West Virginia. A force of about 5000 Confederates under Gen. Floyd, who occupied a strong position here, became engaged with a Federal brigade of the troops under Gen. Rosecrans on the afternoon of September 10, 1861, when some severe fighting occurred until night put an end to the contest. The Federals intended to renew the attack in the morning with a stronger force, but during the night Gen. Floyd withdrew his troops across the river, burned the ferry-boats and the bridge which he had constructed, thus cutting off pursuit, but leaving his camp, baggage, small-arms, and munitions of war in the hands of the Federals.

Carolina, North. See NORTH CAROLINA.

Carolina, South. See SOUTH CAROLINA.

Caroling. A custom of the ancients before going to war, which consisted of singing, etc.

Carpet Knight. A man who obtains knighthood on a pretense for services in which he never participated.

Carpi. In Northern Italy; here Prince Eugène and the Imperialists defeated the French, July 9, 1701.

Carquois (Fr.). A quiver of iron, wood, leather, etc., which was worn slung over the right shoulder.

Carrago. A kind of fortification, consisting of a great number of wagons placed round an army. It was employed by barbarous nations, as, for instance, the Scythians and Goths.

Carreau, Quarreau, or Carre (Fr.). A bolt or dart, with a large steel head, for a cross-bow.

Carriage. A gun-carriage is designed to support its piece when fired, and also to transport cannon from one point to another. It consists of two cheeks, connected together and with a stock by assembling bolts. The front part supports the piece, and rests upon an axle-tree furnished with wheels, the rear end of the stock or trail resting on the ground. See ORDNANCE, CARRIAGES FOR.

Carriage, Casemate. See ORDNANCE, CARRIAGES FOR, SEA-COAST CARRIAGES.

Carriage, Field-. See FIELD-CARRIAGE.

Carriage, Mountain. See ORDNANCE, CARRIAGES FOR.

Carriage, Prairie. See ORDNANCE, CARRIAGES FOR.

Carriage, Sea-coast. See ORDNANCE, CARRIAGES FOR.

Carriage, Siege. See ORDNANCE, CARRIAGES FOR.

Carrical, or Karical. A seaport town of Hindostan, on the coast of Coromandel. It was formerly strongly fortified, but is now thoroughly dismantled. It came into possession of the French in 1759; was taken by the English in 1808; and restored to the French in 1814.

Carrick. An old Gaelic term for a castle or fortress, as well as for a rock in the sea.

Carrickfergus. A seaport town in the county of Antrim, Ireland. Its castle is supposed to have been built by Hugh de Lacy in 1178. The town surrendered to the Duke of Schömberg, August 28, 1689. The castle surrendered to Thurot, a French naval officer, in 1760.

Carrick's Ford. Over the Cheat River, Virginia. On July 18, 1861, a force of Confederates under Gen. Garnett, retreating from Laurel Hill, were pursued and here attacked by Union troops under Gen. Morris, and after a few attempts to make a stand, were completely routed, and Gen. Garnett killed.

Carroccio (Ital.). A very large four-wheeled carriage, which was used by the Crusaders during the Middle Ages. On its platform, which was large enough to hold 50 persons, was erected a tower surmounted with a cross and a standard, and to it was attached a bell, which indicated the passing of the carroccio. Before engaging in battle, an effigy of Christ of life size was placed on the platform and at its feet an altar; then a mass was held. A number of knights guarded it, and it was drawn by oxen richly caparisoned. Its invention is attributed to the people of Lombardy.

Carron. A village in Stirlingshire, Scotland, on a stream of the same name, falling into the river Forth. It is noted for its extensive iron-works. The carronade, a peculiar kind of gun, derives its name from this place.

Carrousel. A species of knightly exercise in imitation of the tournament, common in the courts of Europe till the beginning of the 18th century. It usually consisted in tests of skill in horsemanship, and in the use of the lance, sword, and pistol, the competitors being mostly dressed as were the knights of former times.

Cart. In a military sense, is a vehicle mounted on two wheels, and drawn by hand or by horses or oxen. See HAND-CART, HAND SLING-CART.

Cartagena. A city and fortified seaport of Spain, is in the province of Murcia, and on a bay of the Mediterranean. It was built by Hasdrubal, the Carthaginian general, 242 B.C.; taken by Scipio, 210. It was subsequently taken by the Goths, and did not begin to rise into importance again till the time of Philip II. It was taken by a British force under Sir John Leake in 1706; retaken by the Duke of Berwick, 1707.

Cartagena, or Carthagenia. A fortified city of New Granada, South America. It was taken by the French in 1544, and subsequently by the English under Sir Francis Drake, in 1585, who plundered it and set it on fire; pillaged by the French in 1697; bombarded by Admiral Vernon in March, 1740; and unsuccessfully besieged by the English in 1741. In the contest with the

mother-country, Cartagena was first besieged by Bolivar, and afterwards by Morillo, to whom it surrendered. It was subsequently reduced by the independent troops.

Carte, or Quarte. A movement of the sword in fencing, as tierce and carte. Also a movement of the rifle bayonet drill.

Carte-blanche. In a military sense, means a full and absolute power which is lodged in the hands of a general of an army, to act according to the best of his judgment, without waiting for superior instructions or orders. It likewise strictly means a blank paper, to be filled up with such conditions as the person to whom it is sent thinks proper.

Cartel. As a military term it is used to denote an agreement between two belligerents for the exchange of prisoners.

Cartel-ship. A vessel used in exchanging prisoners or carrying proposals to an enemy.

Carthage. An ancient and celebrated city in Africa, the renowned rival of Rome. It was founded by the Phœnicians, and was one of the latest settlements made by them on the African coast of the Mediterranean, about the middle of the 9th century B.C. No record of the early history of Carthage has been preserved. First alliance of Carthaginians and Romans, 509 B.C.; the Carthaginians in Sicily were defeated at Himera by Gelo, 480 B.C.; they took Agrigentum, 406 B.C., and were defeated by Agathocles, 310 B.C. The first Punic war began (which lasted twenty-three years) in 264 B.C., and ended in 241 B.C. Hamilcar Barcas was sent into Spain, and took with him his son, the famous Hannibal, 237 B.C. Hannibal conquered Spain as far as the Iberus, 219 B.C. The second Punic war began (which lasted seventeen years) in 218 B.C., and ended in 201 B.C. The third Punic war commenced 149 or 150 B.C.; Carthage taken and burned by order of the senate, 146 B.C. A colony settled at Carthage by C. Gracchus, 122 B.C.; its rebuilding planned by Julius Cæsar, 46 B.C., and executed by his successors; it was taken by Genseric the Vandal in 439; retaken by Belisarius, 533; taken and destroyed by Hassan, the Saracenic governor of Egypt, 698.

Carthage. The capital of Jasper Co., Mo., on Spring River. Near here, on July 5, 1861, an engagement took place between some of Gen. Lyon's troops under Col. Sigel, and a superior force of Confederates under Gen. Rains and Col. Parsons. The Union loss was 13 killed and 21 wounded.

Carthoun. The ancient cannon royal, carrying a 66-pound ball, with a point-blank range of 185 paces, and an extreme one of about 2000. It was 12 feet long and of 8½ inches diameter of bore.

Cartouch. A roll or case of paper, etc., holding a charge for a fire-arm.

Cartouch. In gunnery, a case of wood, about 8 inches thick at the bottom, bound about with marline, holding about 400

musket-balls, besides 8 or 10 iron balls of a pound each, to be discharged from a howitzer, for the defense of a pass, etc. It also implies an article made of leather, to sling over the shoulder of the gunner, who therein carries the ammunition from the tumbril for the service of the artillery, when at exercise in the field.

Cart-piece. An early battering cannon mounted on a peculiar cart.

Cartridge. For cannon, is the powder charge and its case. The case is a cylindrical bag of flannel, wildbore, or serge, in which the charge is placed. The mouth is closed by tying with twine, forming the *choke*, which is always turned towards the muzzle when the gun is charged. For chambered pieces the mouth of the cartridge-bag is closed with a *cartridge-block* to give it a proper form. For some services the cartridge is attached to the projectile, in others it is carried separately. See **ORDNANCE, AMMUNITION FOR.**

For *small-arms*, is the complete charge when the powder and lead are in the same case; if separate, it applies only to the powder and its case. A case containing powder only is called a *blank cartridge*. Cartridge-cases for military small-arms were formerly made of paper. In loading the gun the case was torn and the powder and ball put in separately. By using an inflammable paper the cartridge was afterwards used entire, especially in pistols and breech-loaders. Paper cases made very strong and reinforced by metallic heads are still much used in breech-loading shot-guns. Linen or cloth cases were also used at one period.

The introduction of breech-loaders into the military service has led to the universal adoption of *metallic cartridges*. The cases are cylinders of copper or brass, closed at the breech end, and holding both powder and bullet, the latter being retained in the case by a slight crimp. A small quantity of fulminate in the base inflames the powder upon being struck by the firing-pin. England is behind all other nations in the use of the *Boxer cartridge*, the case of which is made by a *wrapping* of thin sheet-brass. In the manufacture of metallic cartridges the United States leads the world. Millions were supplied the Turks in their late war with Russia by the Winchester Arms Company, of New Haven, Conn. Metallic cartridge are *reloading* and *single fire*. *Reloading* cartridges have an external primer, which can be renewed for successive loadings. The *single fire* have the fulminate inside the base, and cannot readily be reloaded. The copper cartridges for the U. S. service rifle, made at Frankford Arsenal, Pa., are of this latter class.

Cartridge-bag. See **CARTRIDGE.**

Cartridge-bags. See **ORDNANCE, AMMUNITION FOR, AMMUNITION FOR FIELD SERVICE.**

Cartridge-belt. A belt for carrying small-

arm cartridges. A form extensively used in the Western United States, called the *prairie-belt*, has a number of leather or canvas loops sewed on the outside in which the cartridges are stuck.

Cartridge-block. See **ORDNANCE, AMMUNITION FOR, STRAPPED AMMUNITION.**

Cartridge, Bottle. A metallic cartridge, so called from its shape. It contains a larger charge than the ordinary cylindrical cartridge for the same caliber. The cartridge used in the Martini-Henry is of this shape.

Cartridge-box. A leathern case, with cells for cartridges, which are protected by a flap of leather. This box is suspended by a leathern strap, which passes over the left shoulder and under the right arm of the wearer, or is suspended from the waist-belt, as in the U. S. service.

Cartridge, Buck-and-ball. A cartridge containing a round musket-ball and 8 buck-shot, formerly much used in smooth-bore muskets.

Cartridge, Buckshot. Containing a charge of buckshot. Formerly used in muskets, but now obsolete for military purposes.

Cartridge, Centre Primed. A metallic cartridge in which the fulminate is placed in the centre of the cartridge head or base.

Cartridge, Multi-ball. A metallic cartridge recently proposed by Capt. E. M. Wright, U. S. Ordnance Corps, in which two or more bullets or pieces of lead are substituted for the ordinary bullet, with the idea of doing more execution at short ranges.

Cartridge-paper. A stout paper formerly used in making military cartridges.

Cartridge, Reloading. See **CARTRIDGE.**

Cartridge, Rim-fire. A metallic cartridge in which the fulminate is placed in the *rim* surrounding the head. This rim being struck at any point, explodes the powder. Formerly much used in pistols and magazine guns. These cartridges are not *reloading*.

Cartridge, Single-fire. See **CARTRIDGE.**

Casale, or Casal. A town of Piedmont, the capital of a province of the same name, on the river Po. Here the French defeated the Spaniards in 1640. In May, 1859, an Austrian reconnoitring party, who had advanced from Vercelli, were here repulsed by the Sardinian Bersaglieri (riflemen).

Casal Nova. A village in Spain, where a corps of Lord Wellington's army had an affair with the French troops under Marshal Masséna, during their retreat from Portugal on March 14, 1811.

Cascabel. In gunnery, is the projection in rear of the breech, and is composed of the *knob*, the *neck*, and the *fillet*. It is used to facilitate the handling of the piece in mounting and dismounting it, and moving it when off its carriage.

Cascans. In fortification, are holes in the form of wells, serving as entrances to galleries, or giving vent to the enemy's mines.

Case-hardening. The process of converting the surface of iron into steel. Formerly much used in making small-arms. The parts to be hardened, such as the *hammer*, *tumbler*, etc., were inclosed in an airtight iron box, filled with charcoal, bones, particles of horn, or other carbonizing substance. The box and its contents were then submitted to prolonged heat. The process is that of incomplete cementation (which see).

Casemate. Was originally a loop-holed gallery excavated in a bastion, from which the garrison could fire on an enemy who had obtained possession of the ditch without risk of loss to themselves. The term was afterwards applied to a bomb-proof vault in a fortress, which is designed for the protection of the garrison, without direct reference to the annoyance of the enemy. A casemated battery consists of such a vault or vaults, with openings for the guns.

Casemate Carriage. A gun-carriage used in casemates. See **ORDNANCE, CARRIAGES FOR.**

Casemate Gun. A gun mounted in a casemate.

Casemates Nouvelles (Fr.). Arched batteries which are constructed under all the openings of revetments or ramparts. The different forts of Cherbourg are defended by these casemates; the works erected around Dover Castle come likewise under this description; the works at Fort Columbus, N. Y., are erected on the same principle.

Casemate Truck. Consists of a stout frame of wood mounted upon three barrette traverse wheels. The front wheel is pivoted so as to change direction. It is used to move cannon and heavy weights through posterns and along casemate galleries.

Casernes. In fortification, are buildings for the soldiers of the garrison to live in; generally erected between the houses of fortified towns and the rampart. In a general acceptance, casernes signify barracks.

Case-shot. In the U. S. service, a case-shot is a hollow cast-iron projectile filled with musket-balls. The projectile has thinner walls than the ordinary shell. To fill it a tube is inserted in the fuze-hole, the balls are introduced, and melted sulphur or rosin is poured in to fill up the interstices and keep the balls in position. When this has solidified the tube is withdrawn, leaving a vacant space for a small bursting charge. This description answers for the two kinds used,—the spherical case for the 12-pounder smooth-bore and the oblong case for rifle guns. Case-shot should be burst in the air a short distance in front of the troops fired upon. Time-fuzes are, therefore, used with both; the Bormann-fuze for the former, and the paper fuze for the latter. In Europe this ammunition is called *shrapnel*, from the inventor. There the term case-shot is applied to what is called in the United States *canis-*

ter,—that is, a thin case filled with bullets, used for short range without fuzes, the case being disrupted in the gun.

Cashier. To dismiss from the service with ignominy. An officer thus dismissed is understood to be excluded from the service thereafter. A dismissed officer may be restored; a cashiered officer is deemed unworthy of the indulgence.

Cashmere. A province of Northern India; was subdued by the Mohammedans in the 16th century; by the Afghans in 1752; by the Sikhs in 1819; and ceded to the British in 1846, who gave it to the Maharajah Gholab-Singh, with a nominal sovereignty.

Casing. The cast-iron case of converted guns (which see).

Casks, Raft of. See **RAFT OF CASKS.**

Casque, or Casck. A piece of defensive armor, to cover and protect the head and neck in battle; a helmet.

Cassano. A town of Lombardy, 16 miles from Milan, on the river Adda. In 1259, Eccelino Romana, chief of the Ghibelines, was here defeated and killed. In 1705 the French under the Duke of Vendôme gained a victory over the Imperialists, commanded by Prince Eugène; and in 1799, Suwarrow inflicted a defeat on the French under Moreau.

Cassel. A city of Germany, 90 miles northeast from Frankfort-on-the-Main. It was the capital of Westphalia under Napoleon I.; besieged by the allies in 1761; taken by the allies November 1, 1762; captured by the Russians in September, 1813.

Cassel. A town of France, department of the North. On April 11, 1677, the Marshal de Luxembourg near here defeated the Prince of Orange, who lost 4000 dead and 8000 prisoners. The French occupied Cassel, June 19, 1707.

Casse-tête (Fr.). A mace or war-club, made of very hard wood, used formerly in savage warfare.

Cassine. A small house, especially in the open country; applied also to a house standing alone, where soldiers may lie hid, or may take a position.

Cas, St. A village on the coast of France, in the department Côte du Nord. Here, in 1758, a landing of the British under Lord Cavendish was repulsed, and 100 years afterwards a column was inaugurated to commemorate the event.

Castalla. A town of Spain, 24 miles northwest of Alicante. The Spaniards under O'Donnell were here defeated by the French under Delort, August 21, 1812.

Casteggio. A town of Northern Italy, in the division of Alessandria. On June 9, 1800, the battle of Montebello was gained by the French under Lannes over the Austrians in the neighborhood of this place. On May 20, 1859, another engagement was fought here between the Austrians under Count Stadion and the French and Sardinian troops, in which the latter were victorious.

Castel-a-Mare. A seaport town of Sicily. Richelieu defeated the Spanish fleet here in 1648; and in 1799 a battle was fought between the French under Marshal Macdonald and the allied English and Neapolitans.

Castel Fidardo. Near Ancona, Central Italy. Near here Gen. Lamoricière and the papal army of 11,000 men were totally defeated by the Sardinian general Cialdini, September 18, 1860. Lamoricière with a few horsemen fled to Ancona, then besieged; on September 29 he and the garrison surrendered.

Castellan. A governor or constable of a castle.

Castellated. Adorned with turrets and battlements, like a castle.

Castellation. The act of fortifying a house and rendering it a castle. Now obsolete.

Castelnaudary. A town of France, department of Aude. It suffered greatly in the wars of the Middle Ages, and under its walls the Duke of Montmorency was made prisoner by the royal troops in 1682.

Castiglione. A fortified town of Lombardy, 22 miles northwest from Mantua. Here, in 1796, the French under Augereau gained a decisive victory over the Austrians. The French commander was afterwards made, on account of this battle, Duc de Castiglione. In 1859 the battle of Solferino also occurred in its neighborhood.

Castillejos. In Northern Africa; here, in January, 1860, was fought the first decisive action of the war between Spain and Morocco. Gen. Prim, after a vigorous resistance, repulsed the Moors under Muley Abbas, and advanced towards Tetuan.

Castillon. A town of France, in the department of Gironde. It is celebrated as the scene of the battle between the forces of Henry VI. of England and Charles VII. of France, in July, 1453, in which the English met with a signal defeat, their leader, the Earl of Shrewsbury, and his son being slain.

Casting. The rejection of horses deemed unfit for further cavalry use.

Casting Cannon. See **ORDNANCE, CONSTRUCTION OF.**

Cast Iron. See **ORDNANCE, METALS FOR.**

Castle. A name given to a building constructed as a dwelling, as well as for the purpose of repelling attack. The name is especially given to buildings of this kind constructed in Europe in the Middle Ages, and which were generally surrounded by a moat, foss, or ditch.

Castlebar. A town of Ireland. French troops under Humbert landed at Killala, and, assisted by Irish insurgents here, compelled the king's troops under Lake to retreat, August 27, 1798; but were compelled to surrender at Ballinamuck.

Castlecomer. A town of Ireland; in the rebellion of 1798 this town was attacked by the rebels, and nearly destroyed by fire.

Castle-guard. The guard which defends a castle.

Castles. In heraldry, castles are often given as charges in the shields of persons who have reduced them, or been the first to mount their walls in an assault.

Cast-metal Gun. See **ORDNANCE, CAST-METAL CANNON.**

Castrametation. Is the art of laying out camps, and of placing the troops so that the different arms of the service shall afford support to each other in the best manner.

Cast Steel. See **ORDNANCE, METALS FOR.**

Casualties. In the military service, is a word which includes all losses in numerical strength of officers by death, dismissal, or resignation, and of enlisted men by death, desertion, or discharge; also all losses in fighting strength caused by wounds.

Casus Belli. A Latin phrase used with reference to any event, or complication between sovereign powers, which gives rise to a declaration of war.

Catafalco. In ancient military architecture, a scaffold of timber, decorated with sculpture, paintings, etc., for supporting the coffin of a deceased hero during the funeral solemnity.

Catalans. The inhabitants of Catalonia, Spain. Their language, costume, and habits are quite distinct from those of the rest of their countrymen. In energy, industry, and intelligence they greatly surpass the rest of the Spaniards. They were considered brave warriors.

Catalaunian Plain. The ancient name of the wide plain surrounding Châlons-sur-Marne, in the old province of Campagne, France, celebrated as the field of battle where the West Goths, and the forces under the Roman general Aetius, gained a great victory over Attila in 451. A wild tradition tells that three days after the great fight, the ghosts of the fallen myriads appeared on the plain, and renewed the conflict.

Catalonia. An old province of Western Spain, was settled by the Goths and Alani about 409; conquered by the Saracens, 712; recovered by Pepin and Charlemagne; united with Aragon in 1137. It formed part of the Spanish marches and the territory of the Count of Barcelona.

Catania (anc. Catana). A town near Mount Etna, Sicily. The ancient city was founded by the Phœnicians or Greeks, and was nearly as old as Rome. It was taken by the Athenian general Nicias about 418 B.C., and was an important city under the Romans. In August, 1862, the town was held by Garibaldi and his volunteers, in opposition to the Italian government. He was captured on August 29.

Cataphract. The old Roman term for a horseman in complete armor.

Cataphracts. In the ancient military art, a piece of heavy defensive armor, formed of cloth or leather, fortified with iron scales or links, wherewith sometimes only the breast, sometimes the whole body, and sometimes the horse too, was covered.

Catapult (Lat. *catapulta*). An engine of

war used by the ancients, somewhat resembling a cross-bow. In the catapult a string or rope, suddenly freed from great tension, gave a powerful impulse to an arrow placed in a groove. There were great catapults, fixed upon a scaffold with wheels, which were used in sieges, and small ones, carried in the hand, which were employed in the field.

Cataract. A portcullis.

Catawba Indians. A tribe of aborigines who formerly inhabited the Carolinas. A remnant still exists on a reservation on the Catawba River. See **INDIANS AND THEIR AGENCIES.**

Cateau Cambresis. In Northern France, where on April 2 and 3, 1559, peace was concluded between Henry II. of France, Philip II. of Spain, and Elizabeth of England. France ceded Savoy, Corsica, and nearly 200 forts in Italy and the Low Countries to Philip.

Caterva. In ancient military writings, a term used in speaking of the Gaulish or Celtiberian armies, denoting a body of 6000 armed men. The word is also used to denote a party of soldiers in disarray; in opposition to *cohort* or *turma*, which signify in good order.

Cat-o'-nine-tails. An instrument of punishment formerly used to flog offenders in the army, consisting of nine pieces of line or cord fastened to a piece of thick rope, and having three knots at intervals.

Cattaro. A fortified town of Dalmatia, Austria, at the bottom of the Gulf of Cattaro. This town was captured by the British in 1813, and till 1814 belonged successively to Austria and France.

Catti. An ancient German tribe, attacked but not subdued by the Romans; absorbed by the Franks in the 3d century.

Caudine Forks. Two narrow mountain-gorges or defiles near the town of Caudium, in ancient Samnium. They are celebrated in connection with a humiliating disaster which the Roman army suffered in 321 B.C.

Caution. An explanation given previous to the word of command, by which soldiers are called to attention, that they may execute any given movement with unanimity and correctness.

Cavalcade. In military history, implies a pompous procession of horsemen, equipages, etc., by way of parade, to grace a triumph, public entry, or the like.

Cavalier. Originally meant any horse-soldier, but in English history is the name given to the party which adhered to King Charles I., in opposition to the Roundheads, or friends of the Parliament.

Cavalier. In fortification, is a defense-work constructed on the *terre-plein*, or level ground of a bastion. It rises to a height varying from 8 to 12 feet above the rampart, and has a parapet about 6 feet high. Its uses are to command any rising ground held by the enemy within cannon-shot, and to guard the curtain, or plain wall between two bastions, from being enfiladed. A cav-

alier battery—used in siege operations—is a battery of which the terre-plein, or platform of earth on which the gun stands, is above the ordinary level of the ground.

Cavalot. An obsolete cannon carrying a ball weighing one pound.

Cavalry. That part of a military force which consists of troops that serve on horseback. In European armies cavalry are generally classed as heavy, medium, and light, —cuirassiers and dragoons, lancers, hussars, etc. In the U. S. service all mounted soldiers are simply called cavalry.

Caveating. In fencing, implies a motion whereby a person in an instant brings his sword, which was presented to one side of his adversary, to the opposite side.

Cavesson. A sort of nose-band of leather or iron, which is put on the nose of a horse, to assist in breaking or training him.

Cavin. In military affairs, implies a natural hollow, sufficiently capacious to lodge a body of troops, and facilitate their approach to a place. If it be within musket-shot, it is a place of arms ready made, and serves for opening the trenches, free from the enemy's shot.

Cavriana. A village of Northern Italy. The tower of this place formed one of the principal positions of the centre of the Austrian army, from which it was driven by the Franco-Sardinian forces, under Napoleon III. and Victor Emmanuel, at the battle of Solferino, June 24, 1859.

Cawnpoor, or Cawnpoor. A town of Hindostan, on the right bank of the Ganges. It is an important British military station. It was garrisoned during the mutiny in June, 1857, by native troops under Sir Hugh Wheeler; these troops broke out into revolt. Nana Sahib, who had long lived on friendly terms with the British, joined the rebels; he took Cawnpoor, June 26, after a three weeks' siege, and in spite of a treaty, massacred great numbers of the British, without respect to age or sex, in the most cruel manner. Gen. Havelock defeated Nana Sahib July 16, at Futtehpore, and retook Cawnpoor, July 17. Sir Colin Campbell defeated the rebels here on December 6, following.

Cayenne. French Guiana, South America; settled by the French, 1604-85. It afterwards came successively into the hands of the English (1654), French, and Dutch. The last were expelled by the French in 1677. Cayenne was taken by the British, January 12, 1809, but was restored to the French in 1814.

Cedar Creek. In Northern Virginia. While encamped on this creek on the morning of October 19, 1864, the army of Gen. Sheridan was suddenly attacked before daylight by the Confederate troops under Gen. Early, its left flank turned, and the whole line driven back in confusion about 4 miles, with the loss of 24 pieces of artillery. Gen. Sheridan, who was at Winchester on his return from Washington, on hearing of this disaster, hastened to the scene of action, re-

formed his corps, and awaited the attack of the enemy, which was made and handsomely repulsed about 1 P.M. About 3 P.M. Sheridan attacked the enemy and completely routed him, recovering his own artillery and capturing 80 pieces besides, thus converting into a brilliant victory what threatened to be a great disaster. About 2000 prisoners and 800 wagons and ambulances fell into Sheridan's hands, and many of his own men who had been taken prisoners in the morning were recovered.

Cedar Mountain. A sugar-loaf eminence about 2 miles west of Mitchell's Station, Culpeper Co., Va. On August 9, 1862, a sanguinary conflict took place here between the Confederate forces under Gens. Jackson and Ewell, and part of Gen. Pope's army under Gen. Banks, night putting an end to the contest. The Federals being largely outnumbered, suffered severely, and fell back about a mile, but without disorder. Their loss was about 1500, 800 of whom were taken prisoners. A considerable quantity of ammunition, stores, etc., also fell into the hands of the Confederates.

Celeres. The life-guards which attended Romulus in the infancy of Rome, were so called. They were laid aside by Numa Pompilius. Celeres were properly distinguished from other troops, by being lightly armed and acting always on foot.

Cells. Places of solitary confinement in which soldiers are placed, as punishment for serious crimes.

Celtiberi, or Celtiberians. An ancient and warlike people of Spain, who are renowned in history for their long and obstinate resistance to the Romans. In the second Punic war, after giving important aid to the Carthaginians, they were induced by the generosity of Scipio to accept the alliance of Rome. They revolted against Rome in 181 B.C., but were appeased by Gracchus in 179. War was renewed in 153, and continued with varying success until after the capture of Numantia, 134 B.C. In spite of this great blow the Celtiberi again renewed the war under Sertorius, and it was only after his fall that they began to adopt the Roman language, dress, and manners.

Cement. Hydraulic cements are much used in building permanent fortifications. The cement used by the Romans in their great sea-walls, aqueducts, etc., which are still standing as monuments of their civil engineering, was *pozzuolana*, a volcanic earth from near *Baiæ*, Italy. It is still an article of export from Italy. The most noted modern cement is Portland, made artificially in England by burning a mixture of the chalk and clay from the valley of the Medway.

Cementation. In metallurgy, is the process of converting metals by absorption under great heat. Specially applied to the conversion of iron into steel by causing it to absorb carbon. The iron bars are imbedded in charcoal and exposed to prolonged heat in a closed furnace. The qualities of the result-

ing steel vary with the degree and duration of the heating. The bars, when removed, are called *blistered steel* from their appearance. See **ORDNANCE**, **METALS FOR**, **BLISTERED STEEL**.

Cenotaph. The empty tomb of a hero, or monument erected in honor of a person, without the body of the deceased being interred in or near it.

Centesimalation. In ancient military history, a mild kind of military punishment, in cases of desertion, mutiny, and the like, when only every one hundredth man was executed.

Central America. Includes the republics of Guatemala, San Salvador, Honduras, Nicaragua, and Costa Rica (which see). They declared their independence September 21, 1821, and separated from the Mexican Confederation July 21, 1823. The states made a treaty of union between themselves March 21, 1847. There has been among them since much anarchy and bloodshed.

Centre. A point equally distant from the extremities of a line, figure, or body; the middle point or place of anything.

Centre of an Army. The body of troops occupying the place in the line between the wings. See **TARGET**.

Centre of Gravity. The point of a body about which all its parts are balanced. This is a matter of great importance in cannon, both for mechanical manœuvres and for ordinary handling. In all large guns in the United States, and in many in Europe, the axis of the trunnions passes through the centre of gravity of the gun. Such guns have no preponderance, and need no support in firing except the trunnions. This innovation was introduced by the genius of Rodman, and brought many advantages in the handling of heavy guns. In projectiles, the *centre of gravity*, or *inertia*, is also a thing of moment. Spherical projectiles in which this point does not coincide with the *centre of figure* are said to be eccentric, and are subject to certain deviations (see **PROJECTILES**); *deviation* of the relative position of these points influences the flight also of rifle projectiles.

Centre of the Bastion. In fortification, is the intersection made by the two demi-gorges.

Centrifugal Gun. A form of machine gun in which balls are thrown from a chambered disk rotating with great speed.

Centrobatic Method. The method ordinarily used to determine by calculation the centre of gravity of a projected gun. The principle used is that the volume generated by any surface in revolving about a fixed axis is measured by the product of the surface into the path described by its centre of gravity. The moments of the weights of the several parts are referred to an axis usually taken tangent to the knob of the cascabel. The sum of these moments, divided by the weight of the piece, gives the distance of the centre of gravity from the

assumed axis. In homogeneous guns, the volumes of the several parts can be used instead of the weights.

Centurion. A military officer among the ancient Romans, who commanded a (*centum*) hundred men.

Century. In an ancient military sense, meant a hundred soldiers, who were employed in working the battering-ram.

Cephalonia. One of the Ionian Islands; was taken from the Ætolians by the Romans 189 B.C., and given to the Athenians by Hadrian in 135. It was conquered by the Normans in 1146, afterwards passed into the possession of the Venetians, and was taken by the English in 1819.

Cephisus. A river in Attica, near which Walter de Brienne, duke of Athens, was defeated and slain by the Catalans in 1811.

Cercelée, or Recercelée. In heraldry, is a cross circling or curling at the ends, like a ram's horn.

Cercle (Grand-cercle), Fr. A form observed under the old government of France, by which it was directed that every evening at a specific hour the sergeants and corporals of brigade should assemble to receive orders, the former standing in front of the latter. Subsequent to the grand cercle, a smaller one was made in each regiment, when general or regimental orders were again repeated to the sergeants of each regiment, and from them communicated to the officers of the several companies.

Ceremonies, Stated Military. Exercises, such as parades, reviews, inspections, escorts of the color, escorts of honor, funeral honors, guard-mounting, etc.

Cerignola. A town of South Italy, in the province of Capitanata. Here, in 1508, the French were defeated by the Spaniards, and the Duke of Nemours, who commanded the former, was slain.

Cerro Gordo. A celebrated mountain-pass in Mexico, about 60 miles northwest of Vera Cruz. Here an army of about 12,000 Mexicans under Santa Anna was totally defeated by about 8000 U. S. troops under Gen. Scott, April 18, 1847. The Mexicans lost about 1000 killed and wounded, besides 8000 prisoners; the American loss was 481 killed and wounded.

Certificate of Disability. See **DISABILITY**.

Certificate of Merit. See **MERIT**, **CERTIFICATE OF**.

Cessation of Arms. An armistice or truce, agreed to by the commanders of armies, to give them time for a capitulation, or for other purposes.

Ceuta. A fortified seaport of Morocco, opposite Gibraltar. The castle stands on the highest point of the ancient *Abyla*, one of the pillars of Hercules, terminating a peninsula. This was a Mauritanian town under the Romans, and in 1415 was taken from the Moors by the Portuguese. In 1580 it passed into the possession of the Spanish, in whose hands it afterwards remained.

Ceylon (anc. *Taprobane*). An island in the Indian Ocean. It was invaded by the Portuguese Almeyda, 1505, but it was known to the Romans in the time of Claudius, 41. The Dutch landed in Ceylon in 1602; they captured the capital, Colombo, in 1603. Intercourse with the British began in 1713. A large portion of the country was taken by them in 1782, but was restored in 1783. The Dutch settlements were seized by the British, 1795. Ceylon was ceded to the British by the peace of Amiens in 1802. The British troops were treacherously massacred or imprisoned by the Adigar of Candy, at Colombo, June 26, 1803. The complete sovereignty of the island was assumed by England in 1815.

Chæroneæ (Boeotia). Here Greece was ruined by Philip, 32,000 Macedonians defeating 80,000 Thebans, Athenians, etc., August 6 or 7, 338 B.C. Here Archelaus, lieutenant of Mithridates, was defeated by Sylla, and 110,000 Cappadocians were slain, 86 B.C.

Chain. A chain made of a kind of wire, divided into links of an equal length, is made use of by military engineers for setting out works on the ground, because cord lines are apt to shrink and give way.

Chain-ball. See PROJECTILE.

Chain-mail. A kind of armor made of interlaced rings, both flexible and strong; much used in the 12th and 13th centuries.

Chain-shot. See PROJECTILE.

Chair. See ORDNANCE, CARRIAGES FOR, NOMENCLATURE OF ARTILLERY CARRIAGE.

Chalcedon. In Asia Minor, opposite Byzantium, colonized by Magarians about 684 B.C. It was taken by Darius, 505 B.C.; by the Romans, 74; plundered by the Goths, 259 A.D.; taken by Chosroes the Persian, 609; by Orchan the Turk in 1338.

Chalcis. An ancient Greek city, of great antiquity, the capital of the island of Eubœa. It rose to great eminence, but finally became a tributary of Athens, from whose sway it revolted several times, being as often, however, subdued, and held until the downfall of the Athenian empire at the close of the Peloponnesian war. In later times it was successively occupied by the Macedonians, Antiochus, Mithridates, and the Romans. It joined the Achæans in the last war against the Romans, and the town was in consequence destroyed by Mummius. The modern city of Égripo, or Negropont, built on its site, for a time in possession of the Venetians, was taken by the Turks in 1470.

Chalgrove. In Oxfordshire, England. At a skirmish here with Prince Rupert, June 18, 1643, John Hampden, of the Parliament party, was mortally wounded. A column was erected to his memory, June 18, 1843.

Challenge. The act of a sentinel in questioning or demanding the countersign from those who appear at his post.

Challenge. See APPENDIX, ARTICLES OF WAR, 26, 27, and 28.

Challenge of Members of Courts-martial. When a member shall be challenged by a prisoner, he must state his cause of challenge, of which the court shall, after due deliberation, determine the relevancy or validity, and decide accordingly; and no challenge to more than one member at a time shall be received by the court.

Châlons-sur-Marne. A town of France, in the department of Marne. Here the emperor Aurelian defeated Tetricus, the last of the pretenders to the throne termed the Thirty Tyrants, 274; and here in 451 Aetius defeated Attila the Hun, compelling him to retire into Pannonia.

Chamade. A signal made for parley by beat of drum.

Chamber. Of a mine, that place where the powder is deposited.

Chamber. In howitzers, and mortars of the old model, was the smallest part of the bore, and contained the charge of powder. In the howitzers the chamber was cylindrical, and was united with the large cylinder of the bore by a conical surface; the angles of intersection of the conical surface with the cylinders of the bore and chamber were rounded (in profile) by arcs of circles. In the 8-inch howitzer, the chamber was united with the cylinder of the bore by spherical surface, in order that the shell might, when necessary, be inserted without a sabot. The chamber is omitted in *all* cannon of the late models, the cylinder of the bore terminating at the bottom in a semi-ellipsoid. The old chambers were subcaliber. The first use of a chamber *larger* than the bore occurred, it is believed, in a gun invented by an American named Ferris. The gun had a great range. One of the most important improvements in recent ordnance consists in the use of this chamber. The English, who deserve the credit of first appreciating it, now use it in all their largest guns. See ORDNANCE, HISTORY OF.

Chambersburg. The capital of Franklin Co., Pa. This place was the scene of several exciting incidents during the civil war. It was occupied by a party of Confederate cavalry under Gen. Stuart in 1862, by a part of Gen. Ewell's forces in June, 1863, and next month almost totally destroyed by fire by a party of Confederate cavalry under Gen. McCausland.

Chamfron, or **Chamfrain**. The frontlet of a barbed or armed horse, usually having a spike between the eyes.

Champ de Mars. An open square in front of the Military School, Paris, which was used for the great meetings of the French people, reviews, etc.

Chamigny. A town of France, department of the Seine, 8 miles east-southeast of Paris. On November 30, 1870, a force of 120,000 French under Gens. Trochu and Ducrot, who made a sortie from Paris, were met near here by the Germans, and some severe fighting ensued, with great loss on both sides, the French holding the taken

possessions until the contest was renewed, December 2, when the French were compelled to retreat.

Champion Hills. In Hinds Co., Miss., west of Jackson. Here the Confederate forces under Gen. Pemberton were defeated by the Union troops under Gen. Grant, May 16, 1863.

Champlain, Lake. An extensive body of water forming part of the boundary between the States of Vermont and New York, and extending northward a few miles beyond the Canada line. It was the scene of engagements between the Americans and British during the war of independence. On its waters also, in 1814, Commodore Macdonough gained a victory over the British fleet.

Chancellorsville. A small village of Spottsylvania Co., Va., near the Rappahannock River, about 65 miles north by west from Richmond. This place was the scene of several sanguinary conflicts between the Federal army of the Potomac under Gen. Hooker and the Confederates under Gen. Lee. On April 28, 1863, the Federal army crossed the Rappahannock; on May 2, Gen. "Stonewall" Jackson furiously attacked and routed the right wing, but was mortally wounded by his own party firing on him by mistake. Gen. Stuart took his command, and after a severe conflict on May 3 and 4, with great loss to both parties, the Federals were compelled to recross the Rappahannock. The struggle was compared to that at Hougoumont during the battle of Waterloo.

Chandelier. In military engineering, a wooden frame, which was filled with fascines, to form a traverse in sapping.

Chanderee, or Chandhaire. A town of India in the province of Malwa. Its fortress, formerly deemed impregnable, consists of a strong rampart of sandstone flanked by circular towers, and is situated on a high hill. During the native wars, being a place of importance, it was frequently besieged.

Chandernagore. The principal settlement of the French in Bengal, which is encompassed by the British district of Hooghly. In 1757 this settlement was taken by the British, but restored in 1763. In 1793 it was again taken by the British, but restored to the French a second time in 1816.

Chandore. A fortified town of British India, 180 miles northwest from Bombay. In 1804 and 1818 this place capitulated to the British.

Chantier (Fr.). A square piece of wood, which is used for the purpose of raising anything. It serves to place barrels of gunpowder in a proper manner, and frequently to try pieces of ordnance instead of frames.

Chantilly. A post-village of Fairfax Co., Va. Here, on September 1, 1862, the Confederate troops of Gen. Lee attacked a part of Gen. Pope's army, under Gens. Reno, Stevens, and Kearney, and a severe conflict ensued, lasting into the night, and resulting in the death of Gens. Stevens and Kearney.

Chape. The metallic part put on the end

of a scabbard, to prevent the point of the sword or bayonet from piercing through it.

Chapeau. In a military sense, a hat, cap, or other head-covering.

Chapeau Bras. A military hat which can be flattened and put under the arm.

Chaperon. A hood or cape worn by Knights of the Garter.

Chaplain. A clergyman with a military commission, giving him the spiritual charge of soldiers. There are 30 post and 4 regimental chaplains in the U. S. army.

Chaplain-General. In the British service, the officer at the head of the chaplain's department.

Chaplet. In heraldry, is always composed of four roses, the other parts being leaves.

Chappe (Fr.). A barrel containing another barrel, which holds gunpowder. It likewise means a composition of earth, horse-dung, and wad, that covers the mouth of a cannon or mortar.

Chapultepec. A strong fortress of Mexico, situated about 2 miles southwest of the metropolis. It consists of an eminence rising to the height of about 150 feet, with a strong castle on top. During the Mexican war it was deemed necessary by Gen. Scott, for strategic reasons, to capture this last outward defense of the capital prior to the attack on the city itself. This was gallantly effected on September 18, 1847, and next day the city was entered by the American forces, thus virtually ending the war. Preparations for the assault were commenced on the night of September 11, and before the evening of the 12th, owing to the skillful arrangement of Gen. Scott's artillery, the exterior defenses began to give way. Next day was determined on for the attack. The American forces were so placed that the assault could be made simultaneously from different sides at a preconcerted signal, which would be the temporary cessation of the cannonade from their batteries. It was given, and the attacking forces advanced, Gen. Quitman's division from the south, and Gen. Pillow from the wooded slope on the west, Gen. Smith's brigade supporting Quitman, Pillow supported by the division of Gen. Worth, and the batteries throwing shells into the fort over the heads of their friends. Under a heavy fire of musketry the attacking forces advance, and step by step they gain every disputed point, scaling-ladders are brought into requisition, an entrance effected, and the defeated Mexicans, dislodged and retreating, are pursued to the very gates of their capital. The American loss during the three days was 838 killed and wounded.

Charcoal. One of the ingredients of gunpowder. It is made by distilling small sticks of wood in closed retorts. Willow, alder, poplar, and dogwood are some of the woods used. In distilling the heat should be kept below redness. Charcoal should be light in weight, and have a velvety fracture. It inflames at about 460° Fahr. Its composition

and properties vary with the nature of the wood and mode of distillation employed.

Charcoal obtained from light wood is the best for gunpowder, as it is more combustible and easy to pulverize, and contains less earthy matters. Willow and poplar are used for this purpose in the United States and black elder in Europe. The wood must be sound and should not be more than 3 or 4 years old, and about 1 inch in diameter; branches larger than this should be split up. It is cut in the spring when the sap runs freely, and is immediately stripped of its bark. The smaller branches are used for fine sporting powder.

The operation of charring may be performed in pits, but the method now almost universally used in making charcoal for gunpowder is that of *distillation*. For this purpose the wood is placed in an iron vessel, generally of a cylindrical form, to which a cover is luted; an opening with a pipe is made to conduct off the gaseous products, and the wood is thus exposed to the heat of a furnace. The progress of distillation is judged of by the color of the flame and smoke, and sometimes by *test-sticks*, which are introduced through tubes prepared for the purpose.

Properties.—The charcoal thus obtained should retain a certain degree of elasticity, and should have a brown color, the wood not being entirely decomposed. As it readily absorbs one-twentieth of its weight of moisture, which diminishes its inflammability, it should be made only in proportion as it is required for use. Wood generally contains 52 per cent. of carbon, but distillation furnishes not more than 80 to 40 per cent. of charcoal.

As it is desirable to have charcoal for gunpowder very combustible, it must be prepared at a low temperature, and must be light.

Accidents.—When recently prepared charcoal is pulverized and laid in heaps, it is liable to absorb oxygen with such rapidity as to cause spontaneous combustion. This has been the cause of serious accidents at powder-mills, and hence it is important not to pulverize charcoal until it has been exposed to the air for several days. When charcoal has not absorbed moisture, and is mixed with oxidizing substances, it may be inflamed by violent shocks or by friction. This is the principal cause of the accidents which occur in the preparation of explosive mixtures which contain charcoal. See GUN-POWDER.

Chard. A town of England, in Somersetshire. Here the royalists were defeated in the civil wars between Charles I. and the Parliament.

Charenton. A town of France, in the department of the Seine. It stands on the Marne, over which there is a bridge, which was frequently the scene of bloody conflicts between the citizens and the soldiers during the French revolutions. It now forms a portion of the fortifications of Paris.

Charge. The act of rushing on the enemy with a view to come to close fighting. It is also sometimes applied to the temporary command of a detachment, troop, company, or battery. A charge likewise means the statement of the crime for which an officer or soldier is brought before a court-martial.

Charge. The quantity of powder with which a piece of artillery is loaded. The charge corresponding to the maximum velocity in the projectile is called the *maximum charge*. The longer the gun the greater the maximum charge. In the early days of artillery, when powder was used in the form of *dust*, a very large charge was necessary. After the introduction of grained powder it was reduced gradually to about one-fourth the weight of the shot. At the time of the recent departures in ordnance, the charge for smooth-bore guns was from one-fifth to one-eighth the weight of the projectile; for howitzers, from one-eighth to one-twentieth; for mortars the charge varied with the range, the largest being about one-ninth. For rifle guns the disproportion was greater than for smooth-bores, the average being about one-tenth. In small-arms, the charge for the old smooth-bore musket was about one-third the weight of the ball. When the rifle was introduced, this proportion was retained till the oblong bullet began to be used, when the charge was relatively much diminished, till it fell to about one-tenth. The tendency lately has been to increase it. In some of the best-known rifles of the present day the charge is about one-fifth,—a majority use more than one-sixth. The same tendency is still more observable in heavy ordnance. The largest *Krupp*, *Woolwich*, and *Armstrong* guns use a charge greater than *one-fourth* the weight of the projectile.

Charge. The position of a weapon fitted for attack; as, to bring a weapon to the charge.

Charge. In heraldry, the figures represented on a shield are called charges, and a shield with figures upon it is said to be charged. The charges in a shield ought to be few in number, and strongly marked, both as regards their character and the mode of their representation. The family shield belonging to the head of the house almost always is simpler,—i.e., has fewer charges than the shields of collaterals, or even of junior members.

Charger (Fr. *cheval de bataille*). A horse kept by an officer for military purposes.

Chariot. In antiquity, a war car or vehicle.

Charleroi. A strongly fortified town of Belgium, in Hainaut. This place was fortified by Vauban. Several great battles have been fought near this town, especially in 1690 and 1794. Charleroi was besieged by the Prince of Orange, 1672 and 1677; but he was soon obliged to retire. Near here, at Ligny, Napoleon attacked the Prussian line, making it fall back upon Wavres, June 16, 1815.

Charleston. A port of entry and the chief city of South Carolina, founded in 1672. On Sullivan's Island, about 7 miles below, communicating with the harbor, a garrison of about 400 Americans under Col. Moultrie sustained an assault from 9 British ships of war, and gallantly repulsed them, on June 28, 1776. The city was afterwards besieged, and after a gallant resistance of nearly six weeks surrendered to the British, May 12, 1780, being held by them till 1782. In the civil war (1861-65) it was here the first gun was fired, which resulted in the reduction of the famous Fort Sumter. In the latter part of the war it was bombarded and besieged by the Federal troops. Its evacuation by the Confederates and its occupation by the Federals followed, February 18, 1865.

Chase. In gunnery, is the conical part of the gun in front of the reinforce.

Chase-ring. In gunnery, is a band at the front end of the chase.

Chassepot. A species of rifle. See **SMALL-ARMS**.

Chasseurs. A French word signifying "hunters," applied in various forms to light troops in the French service, organized at different times, either as infantry or cavalry, as *chasseurs à pied*, *de Montagne*, *de Vincennes*, for infantry, and *chasseurs à cheval*, *d'Afrique*, *Algériens*, etc., for cavalry. They have organizations in other armies also corresponding to these, such as the *jägers* in the Austrian army, and the *cacciatori dei Alpi* of the Garibaldian troops in the Italian war of 1859-60.

Chassis. A traversing frame or movable railway, along which the carriage of a heavy gun in barbette, or casemate, moves backward and forward in action. See **ORDNANCE, CARRIAGES FOR, SEA-COAST CARRIAGES**.

Chastleton. A parish of England, in Oxfordshire, 5 miles from Chipping Norton. Here, in 1016, Canute defeated Edmund Ironside.

Châteaudun. An old city in Northwest France, the residence of the heroic Dunois, who died in 1468. Here were massacred July 20, 1183, about 7000 Brabançons, fanatic mercenaries who had been hired to exterminate the Albigenses by the Cardinal Henry, abbot of Clairvaux, in 1181. They had become the scourge of the country, and the "Capuchons" were organized for their destruction. Châteaudun was captured by the Germans after a severe conflict of about 9 hours, October 18, 1870. Barracks had been erected in the town, and the Garde Mobile fought bravely. The town was re-occupied by the French, November 6.

Château Thierry. A town of France, in the department of Aisne. It is built on the slope of a hill, capped by the ruins of a castle, which is said to have been erected by Charles Martel in 780. In 1814 this place was the scene of several conflicts between the allied army and the French troops.

Chatham. A town of England, in the

county of Kent, on the Medway. It is a principal station of the royal navy. There is a fine station and military arsenal close to Chatham, containing vast magazines and warehouses, in which there are all kinds of stores, and where all the operations necessary for building and fitting out ships of war are carried on. There are also extensive barracks for infantry, royal marines, artillery, and engineers. Chatham is defended by forts on the heights, by which it is partly surrounded. There are also very extensive fortifications about Chatham, called the Lines, which are defended by ramparts, palisades, and a broad, deep ditch. On June 10, 1867, the Dutch fleet under Admiral Ruyter sailed up to Chatham and burnt several men-of-war. The entrance into the Medway is now defended by Sheerness and other forts.

Chatillon-sur-Seine. A town of France, department of Côte-d'Or, 48 miles north-northwest of Dijon, on the Seine. Here a congress was held by the four great powers allied against France, at which Caulaincourt attended for Napoleon, February 5, 1814; the negotiations for peace were broken off on March 19, following.

Chattanooga. A village of Hamilton Co., Tenn. During the civil war it was the scene of many exciting incidents between the contending forces. It was attacked by Gen. Negley in June, 1862; occupied by Gen. Rosecrans, July, 1863, and in the same year were fought in its vicinity a succession of the most momentous battles of that eventful epoch, commencing September 28, 1863, with Gen. Grant's attack on Gen. Bragg. The movements were under direction of Gens. Sherman and Thomas, and resulted, after three days' severe fighting around Chattanooga, Missionary Ridge, and Lookout Mountain, in the total defeat of the Confederates, and their pursuit back into Georgia.

Chaumont, Treaty of. Entered into between Great Britain, Austria, Russia, and Prussia, and signed by these powers respectively March 1, 1814. This treaty was succeeded by the celebrated treaty of Paris, April 11, following, by which Napoleon renounced his sovereignty over France.

Chausses. In the armor of the Middle Ages, were defense-pieces for the legs. Some were made of padded and quilted cloth, with metal studs; some of chain-metal, some of riveted plates, and some of banded mail. It was not unusual to fasten them by lacing behind the leg.

Chauvinisme (Fr.). An exaggerated idea of the qualities of a leader, as Chauvin, a character in a French play (from whom the name is derived), is represented to have had of his leader, Bonaparte.

Checky. In heraldry, when the field of any charge is composed of small squares of different tinctures, it is said to be *checky*.

Checks. In the construction of artillery-carriages, are the parts between which the

piece is placed and upon which the trunnions are supported. See **ORDNANCE, CARRIAGES FOR, NOMENCLATURE OF ARTILLERY CARRIAGE.**

Chelone, or Tortoise. In military antiquity, the form of battle adopted by the Greeks in besieging fortified towns. It served to protect the besiegers in their approach to the walls. This invention was formed by the soldiers placing their shields over their heads, in a sloping position, similar to the tiles of a house. The first rank stood erect, the second stooped a little, the third still more, and the last rank knelt. They were thus protected from the missile weapons of the foe, as they advanced or stood under the walls of an enemy. The chelone was similar to the *testudo* of the Romans. See **TESTUDO.**

Chelsea. A parish of England, in Middlesex, on the Thames. Chelsea Hospital is the great national asylum for decayed and maimed soldiers, and one of the noblest institutions of the kind in Europe. The institution was founded by Charles II. in 1682. Connected with the hospital is the Military Asylum, a noble establishment, founded in 1801, for the education and maintenance of the children of soldiers. See **ASYLUM.**

Chemin-des-Rondes (Fr.). A beam from 4 to 12 feet wide, at the foot of the exterior slope in a permanent fortification. It is sometimes covered in front by a hedge, or low wall, or small parapet of earth.

Chemise. In mediæval fortification, an additional escarp or counter-guard wall, covering the lower part of the escarp.

Cherasco. A town of Piedmont, situated on the Tanaro. A peace was concluded here between Louis XIII. of France and the Duke of Savoy, in 1631. On April 26, 1796, the place was taken by the French, and here, three days after, the "Armistice of Cherasco" was concluded between the Sardinian commissioners and Napoleon, by which the latter obtained the right of free passage for his troops through the Sardinian states; and the treaty that followed gave to the French republic Savoy, Nice, and the possessions of Piedmont to the westward of the highest ridge of the Alps.

Cheraw. A village of Chesterfield Co., S. C. It was a Confederate depot of supplies during the civil war, and was captured with all its stores by Gen. Sherman, March 3, 1865.

Cherbourg. A fortified seaport town and important naval station of France, department of Manche, on the English Channel. Edward III. of England unsuccessfully laid siege to Cherbourg in 1346, but in 1418 it was given up to the British. The French regained it in 1450, but the English again took it in 1768.

Cheriton Down. In the county of Hants, England. Here Sir William Waller defeated the royalists under Lord Hopton, May 29, 1644.

Cherokee Indians. A tribe of aborigines

who formerly occupied the southern portion of the Appalachian Mountains, and a large tract of country on both sides of the range. In 1838 they were removed by the U. S. government to the west of the Mississippi, into what is now Indian Territory, and the portion of the tribe that now remains have a civilized government and a written language. For numbers, etc., see **INDIANS AND THEIR AGENCIES.**

Cherusci. One of the most celebrated of all the German tribes at the time of Cæsar. Being excited to hostilities by the tyranny and rapacity of the Romans, they entered into a confederation with the neighboring tribes, and, under their leader Arminius, defeated a Roman army at Teutoburg Forest, in A.D. 9. Germanicus, a Roman general, afterwards tried to avenge this disgrace to their honor by subduing them, but was unsuccessful. Owing to their own internal dissensions they were subsequently subdued by the Chatti, another German tribe.

Chesses. Are the platforms which form the flooring of military bridges. They consist of two or more planks, ledged together at the edges by dowels or pegs.

Chest, Ammunition.- See **ORDNANCE, CARRIAGES FOR, THE CAISSON.**

Chest, Military. Is a technical name for money and negotiable securities carried by an army, and intended to defray its current expenses. In the British military system this department is managed by the commissariat; in the United States, by the paymaster-general and commissary-general.

Chester. A city of England, in the county of Cheshire. The British *Caerleon* and the Roman *Deva*, the station of the Twentieth Legion, *Valeria Victrix*, quitted by them about 477. The city was first built by Edelfeda about 908. Chester was ravaged by the Danes in 980; taken after three months' siege for the Parliament in 1645. A projected attack of Fenians on Chester Castle was defeated by the vigilance of the authorities and the arrival of the military, February 11-12, 1867.

Cheval-de-frise. A piece of timber traversed with wooden spikes, pointed with iron, 5 or 6 feet long, used to defend a passage, stop a breach, or make a retrenchment to stop cavalry.

Chevalet (Fr.). A sort of bell-tent, formerly used in the French service, when an army encamped. It resembled in some degrees the wigwam of an Indian.

Chevalier (Fr.). A horseman; a knight. A member of certain orders of knighthood. In heraldry, a horseman armed at all points.

Chevet (Fr.). A small wedge which is used in raising a mortar. It is placed between the frame and swell of the mortar.

Cheviot Hills. A mountain-range extending along the border between Scotland, and England; the scene of many conflicts between the Scotch and English.

Chevrette. An engine for raising guns or mortars into their carriages.

Chevron. The arrow-headed stripes on the arm, by which the rank of a non-commissioned officer is indicated.

Chevron. In heraldry, is an ordinary representing the rafters of a house, and supposed to betoken the accomplishment of some memorable work, or the completion of some business of importance, generally the foundation of his own family by the bearer.

Cheyenne Indians. A tribe of aborigines dwelling east of the Rocky Mountains, and divided into three bands. For numbers, etc., see **INDIANS AND THEIR AGENCIES**.

Chiari. A town of Northern Italy, near the Oglio. In 1701, Marshal Villeroi was near this town defeated by Prince Eugène.

Chicane. To dispute every foot of ground, by taking advantage of natural inequalities, etc.

Chickahominy. A river in Eastern Virginia, which, rising about 16 miles northwest of Richmond, flows southeastwardly into the James. Along the margins of the river was the scene of Gen. McClellan's operations in 1862.

Chickamauga. A village of Hamilton Co., Tenn. During the civil war a continuous series of combats were fought here, between the forces of Gen. Rosecrans and Bragg, but without decisive results, September 19-20, 1868.

Chickasaw Indians. A warlike tribe of aborigines which formerly occupied Alabama and a portion of Mississippi. They removed into the Indian Territory in 1837. See **INDIANS AND THEIR AGENCIES**.

Chief. The head or leader of any band or community; a commander.

Chief. In heraldry, an ordinary formed by a horizontal line occupying the upper part of the escutcheon. Any object borne in the upper or chief part of the shield is said to be *in chief*, though the chief be not divided off from the rest of the field as a separate portion.

Chief of Staff. In the U. S. service a chief of staff with the rank of brigadier-general was provided by law for the lieutenant-general commanding the army. The senior staff-officer of a general is sometimes designated as the chief of staff. See **OFFICERS, STAFF,** and **STAFF**.

Chieftain. A captain, leader, or commander; a chief; the head of a troop, army, or clan.

Chieftaincy. Chieftainship. The rank, office, or quality of a chieftain.

Chili. An independent republic of South America, bordering on the Pacific Ocean. It was invaded by Almagro in 1535, he being sent by Pizarro to subdue the country. In the 16th and 17th centuries violent contests raged between the Spaniards and Indians, both parties suffering severely. The country continued a vice-royalty of Spain till 1810, when a revolution commenced which terminated in its independence in 1817.

Chilled Iron. Cast iron hardened by pouring it into iron molds. Much used in

manufacturing armor-piercing projectiles. The celebrated Palliser shot is of this kind.

Chilled Shot. See **PROJECTILES**.

Chillianwallah, Battle of. In India, between the Sikh forces in considerable strength and the British commanded by Lord (afterwards Viscount) Gough, fought January 18, 1849. The Sikhs were completely routed, but the loss of the British was very severe. On February 21, Lord Gough attacked the Sikh army under Shere Singh in its position at Goujerat, with complete success, and the whole of the enemy's camp fell into the hands of the British.

China. The "Celestial Empire," in Eastern Asia, for which the Chinese annals claim an antiquity of from 80,000 to 100,000 years B.C., is allowed to have commenced about 2500 B.C.; by others to have been founded by Fohi, supposed to be the Noah of the Bible, 2240 B.C. We are told that the Chinese were acute astronomers in the reign of Yao, 2357 B.C. Towards the close of the 7th century B.C. the history of China becomes more distinct. Thirty-two dynasties have reigned, including the present. See important cities of China throughout this work.

China, Great Wall of. One of the most remarkable structures known in history, supposed to have been erected about 220 B.C. by the first emperor of the Tsin dynasty as a protection against the invasions of the Tartars. It traverses the northern boundary of China, and extends about 1250 miles. Including a parapet of 5 feet, the total height is 20 feet, thickness of base 25 feet, and at the top 15 feet. Towers or bastions occur at intervals of about 100 yards. Earth inclosed in brick-work forms the mass of the wall, but for more than one-half its length it is little else than a heap of gravel and rubbish.

Chinese Fire. A pyrotechnic composition, consisting of 16 parts of gunpowder, 8 of nitre, 8 of charcoal, 8 of sulphur, and 8 of iron-borings.

Ching-Hai. A fortified seaport town of China. At this place, in October, 1841, the Chinese were signally defeated by the British.

Ching-Kiang-Foo. A fortified city of China, on the Yang-tse-Kiang River. It was taken by the British, after a determined resistance on the part of the Mantchoo garrison, July 21, 1842.

Chinook. An artificial language or jargon originated by the Hudson Bay Company for communicating with different tribes of Indians. It consists of about a hundred words, some coined, some French, and some of Indian origin. It is still extensively used as a sort of court language by the different tribes along the Pacific coast, from California to Behrings Strait.

Chinook Indians. A collection of races of Indian tribes inhabiting the Lower Columbia in Washington Territory and Oregon.

Chippewa. A village of Canada West, memorable for the victory gained by the Americans, 1900 strong, under Gen. Brown, over 2100 British troops under Gens. Rial and Drummond, July 4, 1814.

Chippewa Indians, or Ojibways. A tribe of aborigines who inhabit portions of Michigan, Wisconsin, and the basin of Lake Superior. In the early settlement of the country they were allies of the French, and waged inveterate warfare against the Sioux. In 1855 they ceded their lands to the United States, and are now placed on reservations. See **INDIANS AND THEIR AGENCIES**.

Chivalry (Fr. *Chevalerie*, from chevalier, "knight," or "horseman"). The system of knighthood, together with the privileges, duties, and manners of knights. The qualifications or character of knights, as valor, dexterity in arms, courtesy, etc.

Chlorate of Potassa. Chlorate of potassa is formed by passing a current of chlorine, in excess, through lime-water, and then treating the mixture with the chloride of potassium or by the carbonate or sulphate of potassa. The chlorate of potassa and chloride of calcium are formed,—the former crystallizes, the latter remains in solution. It is soluble in water, but not sensibly so in alcohol. It is a more powerful oxidizing agent than nitre, and, when mixed with a combustible body, easily explodes by shock or friction. It is inflamed by simple contact with sulphuric acid, and thus affords a simple means of exploding mines.

Chlorates. Oxidizing agents used in *explosives* (which see). Chlorate of potassa is the salt ordinarily used.

Chocks. See **IMPLEMENTS**.

Choctaw Indians. A tribe of aborigines which formerly lived in Mississippi, along the Yazoo River. They are now settled in Indian Territory, and are partially civilized. See **INDIANS AND THEIR AGENCIES**.

Choczim, or Chotyn. A fortified town of Bessarabia, Southern Russia, on the Dniester. Here the Turks were defeated by the Poles in 1621, and again in 1678; the Turks were again defeated at this place by the Russians in 1739.

Choke. The tied end of a cartridge; also the constriction of a rocket-case, etc.

Choker. An implement used by engineers to compress and test the circumference of a fascine. It consists of two strong pieces of wood about 4 feet long joined by a chain. Two rings inserted in the chain mark the length of the circumference required.

Chokey. An East Indian guard-house and prison.

Cholet. A town of France, in the department of Maine-et-Loire. Here, during the Vendean war, two actions were fought in 1793, in both of which the royalists were defeated. In the first they lost their brave general, Bonchamps; and the second drove them across the Loire, thus virtually deciding the war against them.

Chosroes. See **KHOSROO**.

Chotyn. See **CHOCZIM**.

Chouans. The name which a band of peasants received who fought for the monarchy against the convention in Maine and Normandy in 1793. They received their name from their leader, Jean Cattereau, nicknamed "Chouan," and were with great difficulty subdued, their final submission not taking place till 1803.

Christian Charity, Knights of the Order of. Was the name of an order instituted by King Henry III. of France for the support of maimed officers and soldiers who had done good service in the wars. Henry IV. placed it under the charge of the marshals and colonels of France, and by means of it many of those who had served their country faithfully were enabled to spend the latter portion of their lives in peace and above want. The order formed the germ of that noble hospital, the *Invalides*, which was founded by Louis XIV., and which served as a model for the English hospitals of Greenwich and Chelsea. On the founding of the hospital the order was superseded.

Christiansand. A fortified seaport of Norway, and capital of a government of the same name. This place was founded in 1641 by Christian IV.; and was taken by the British in 1807.

Christ, Order of. When the Templars were expelled from France, and their property confiscated by Philippe le Bel, they were received into Portugal, and their order revived there in 1317 under this title. Noble descent and three years' military service against the infidel were required for admission.

Chrome Steel. See **ORDNANCE, METALS FOR**.

Chronograph. See **CHRONOSCOPE**.

Chronoscope. An instrument for measuring minute intervals of time. The term is specially applied by military men to instruments for obtaining initial velocities. The *gun-pendulum* and *ballistic-pendulum* were formerly used for this purpose, but are now nearly obsolete. All modern chronoscopes use electricity as a transmitting agent. The general method of applying it is to have the current-bearing wires pass through two targets placed in the path of the projectile. These wires are cut by the projectile, and the interval between the successive ruptures is recorded by a delicate time-keeper. Knowing the distance between the targets, the velocity is obtained by dividing this space, expressed in feet, by the number of seconds in the interval. Chronoscopes differ in the kind of time-keeper employed. One of the largest classes of chronoscopes use the pendulum.

The *electro-ballistic machine* of Col. Benton (U. S. Ordnance Department) may be taken as a type of this class. It consists of two pendulums having equal times of vibration suspended from the same horizontal axis. When the pendulums are deflected, one to the right the other to the left, through angles of 90°, pieces of soft iron attached to them

come in contact with electro-magnets, which serve to hold them up. Each of these magnets is excited by a current passing through one of the targets. When the targets are ruptured the pendulums fall, and in passing each other record the point of meeting by operating a delicate bent lever attached to one of them, which leaves a dot of ink on the arc in front of which the pendulums vibrate. The *interval of time* between the rupture of the two targets is obtained from a table of arcs and corresponding times. Col. Benton has also invented an instrument called *velocimeter*, in which he uses threads instead of electro-magnets to hold up the pendulums. The threads pass through the targets, and when they are cut the pendulums fall as before. This method has found considerable favor where great accuracy is not required.

Schultz's chronoscope uses as a time-keeper a tuning-fork, which, in its vibrations, traces a wavy line upon a revolving cylinder. The rupture of each of the targets is recorded by an electric spark deposited on the cylinder near the wavy line. The number of waves between the spark spots gives the *interval of time* when the *period of vibration* or *tarage* of the fork is known. The vibration of the fork is sustained by electro-magnets, which alternately attract and release the branches, an interrupter being placed in the circuit. When the current passing through the targets is broken an induced current is generated, which deposits the spark on the cylinder in leaping a short break in the circuit. When the first target is broken, by an ingenious contrivance the current is made through the second target before the shot reaches it. The *tarage* of the fork is obtained by placing a second's pendulum in the target current, which ruptures the current in each vibration, and produces a series of spark spots on the cylinder. The number of waves between successive spots gives the number of vibrations to the second.

Boulanger's chronograph is the simplest of all chronoscopes. It uses a rod held up vertically by a magnet, which is excited by a current through the first target. The current through the second target, when broken, releases a spring knife-blade, which, moving sideways, marks the rod in its fall. The *interval of time* is obtained from the distance through which the rod has fallen, as shown by the position of the mark. The end of the scale is marked when both currents are simultaneously broken.

Chrystler's, or Chrystler's Field, Battle of. The name of an engagement which took place at Chrystler's farm, on the St. Lawrence River, November 11, 1813, between the American forces under Gen. Boyd and the British troops under Lieut.-Col. Morrison, in which neither party gained a victory, but the advantage was with the British.

Chunar, Treaty of. Concluded between the nabob of Oude and Governor Hastings,

by which the nabob was relieved of his debts to the East India Company, on condition of his seizing the property of the begums, his mother and grandmother, and delivering it up to the English, September 19, 1781.

Churubusco. A village or hamlet of Mexico, on the Rio de Churubusco, about 6 miles south of the city of Mexico. This place was the scene of a battle between the American forces under Gen. Winfield Scott, marching on the city of Mexico, and the Mexicans, defending the approaches to their capital, under President Santa Anna. The battle of Contreras was fought on the same day. The Americans were victorious in both battles, taking 3000 prisoners, and capturing 87 pieces of ordnance. The entire Mexican army was dispersed, their ancient capital captured, and an honorable peace ensued.

Chusan. One of a group of islands off the east coast of China. This island, called the "key of China," was taken by the British in 1840 and 1841, and held by them until the terms of their treaty with China were fulfilled by the latter power.

Cimbres. A chain of mountains in Mexico. On April 28, 1862, the advance-guard of the French, commanded by Gen. Count de Lorencez, encountered and defeated in a defile of this chain a Mexican force 6000 strong under Gen. Saragosa, who had fortified themselves and placed 18 pieces of artillery in position.

Cimbri. A warlike tribe of ancient Europe, which, in conjunction with the Teutones and others, invaded the south of Europe, and successively defeated six Roman armies, until in the end they were conquered by Caius Marius, 101 B.C. They had previously devastated Gaul and Spain, and are said to have lost from 100,000 to 140,000 men in the battle with Marius.

Cimeter. A short sword with a convex edge or recurved point, used by the Persians and Turks.

Cimier (Fr.). A heavy ornament which the ancient knights or chevaliers in France and in other countries were accustomed to wear upon their helmets; small figures were afterwards substituted in their stead.

Cincinnati, Order of. A society which was founded in the United States by officers of the Revolutionary army in 1783. Its object was to keep alive the feelings of friendship and patriotism engendered by common toils and perils, and to assist those who were in need through the vicissitudes of the war. In 1787, Washington was elected president of the order.

Cinquain. In ancient military history, was an order of battle, to draw up 5 battalions, so that they might make 8 lines, that is, a van, main body, and reserve.

Cintra. In Portugal. Here was signed an agreement on August 22, 1808, between the French and English, the day after the battle of Vimeira. As it contained the basis of the convention signed on August 30, following, it has been termed the con-

vention of Cintra. By it Junot and his army were permitted to evacuate Portugal free, in British ships. The convention was publicly condemned, and in consequence a court of inquiry was held at Chelsea, which exonerated the British commanders. Wellington and Napoleon both justified Sir Hew Dalrymple.

Cipher. A preconcerted enigmatical system of communication. Much used in war when dispatches are liable to interception by the enemy,—both for written communication and for signaling.

Circassia. A country in Asia on the north side of the Caucasus. The Circassians are said to be descended from the Albanians. They were unsubdued, even by Timour. Circassia was surrendered to Russia by Turkey by the treaty of Adrianople, 1830. The Circassians under their great leader Schamyl resisted the authority of Russia. They were defeated by Orbelliani in June, November, and December, 1857. Orbelliani subdued much of the country, and expelled the inhabitants, April, 1858. Schamyl, their leader, was captured and treated with much respect, September 7, 1859. The last of the Circassian strongholds captured and the war declared at an end, June 8, 1864.

Circitores. So were named, in the Roman armies, the men who inspected the sentinels.

Circuit-closer. A device for closing an electrical circuit. In torpedo warfare the term is applied to an apparatus used to explode submarine mines.

Circumferenter. An instrument used by engineers for measuring angles.

Circumvallation. Works made by besiegers around a besieged place facing outwards, to protect their camp against attacks from a hostile army operating in the rear. It usually consists of a chain of redoubts, either isolated or connected by a parapet.

Cisalpine. This—that is, the south—side of the Alps.

Citadel. A fort of 4 or 5 bastions in or near a town. It serves two purposes, enabling the garrison of a town to keep the inhabitants in subjection, and in case of siege forming a place of retreat for the defenders, thus enabling them to hold out after the rest of the town has been captured. It must fully command the fortifications of the city, and have a large space around it clear of buildings.

Citate. A place close to the Danube, where the Russian general Gortschakoff, intending to storm Kalafat, threw up redoubts, which were stormed by the Turks under Omar Pasha, January 6, 1854. The fighting continued on the 7th, 8th, and 9th, when the Russians were compelled to retire to their former position at Krajowa, having lost 1500 killed and 2000 wounded.

City Point. A village of Prince George Co., Va., on the James River, at the mouth of the Appomattox. During the civil war, Gen. Grant fixed his headquarters at this point in 1864, and during his subsequent

operations against Richmond it was the base of supplies for his army.

Ciudad Real. A town of Spain, capital of a province of the same name, about 100 miles south of Madrid. The French under Sebastian here defeated the Spaniards in March, 1809.

Ciudad Rodrigo. A fortified town of Spain, in the province of Salamanca. It was occupied by the Portuguese in 1706, and during the Peninsular war was the object of frequent contention between the French and the allies. In June, 1810, the French under Masséna invested the town, and, after a gallant defense by the Spaniards, it was forced to surrender, July 10. In January, 1812, after a siege of 11 days, the place was assaulted, and after a bloody struggle the British succeeded in capturing the town. This storming was one of the most brilliant events in English military annals.

Civic Crown. Among the ancient Romans, was a crown given to any soldier who had saved the life of a citizen. It was composed only of oaken boughs, but accounted more honorable than any other.

Civière (Fr.). A small hand-barrow, which is carried by two men, and is much used by the artillery.

Civil Authority. See APPENDIX, ARTICLES OF WAR, 69.

Civil War. See WAR, CIVIL.

Civilized Warfare. See WAR, also HONORS OF WAR.

Civita Castellana. A town of Italy, 24 miles north from Rome. In its neighborhood an engagement took place between the Neapolitans under Mack and the French under Macdonald, on December 4, 1798.

Civita Vecchia. The principal seaport of the Papal States, in Italy, built on a bay of the Mediterranean. It was frequently sacked in the different wars. In April, 1849, a French force of 6000 men, under Gen. Oudinot, landed here on its way to Rome, where the republic had been proclaimed, and a triumvirate appointed. The French troops overthrew the republic and restored the pope to Rome, from which he had fled in 1848.

Civitella del Tronto. A fortified town of Italy, in the province of Abruzzo Ultra. Here the Neapolitan garrison surrendered to the Piedmontese general Mezzacapo on March 20, 1861.

Clarigation. In Roman antiquity, a ceremony which always preceded a formal declaration of war. The chief of the heralds went to the territory of the enemy, where, after some solemn prefatory indication, he, with a loud voice, intimated that he declared war against them for certain reasons specified, such as injury done to the Roman allies, or the like.

Claymore (Gaelic, signifying great glaive, or sword). Properly a great two-handed sword, used by the Highlanders only.

Clayonages (Fr.). A species of hurdle, with which the timber-work of a gallery is covered. It is likewise used in saps.

Clermont. A town of France, department of Oise, 16 miles by rail south-southeast of Beauvais. It was burned by the English in 1859; besieged by Marshal de Boussac in 1480; captured by the English in 1484; taken by Henry IV. in 1595, and occupied by the Prince de Condé in 1615.

Clermont-Ferrand. A city of France, capital of the department Puy-de-Dôme. It was captured by the Vandals in 408; besieged without success by the Visigoths in 478. It was taken by Thierry in 506; sacked by Pepin in 761; captured by the Normans in 858. The great council in which the crusades originated was held here in 1095.

Clice (Fr.). A long and curved Turkish sabre.

Clide (Fr.). A machine of war, used during the Middle Ages to throw rocks on besieging parties.

Clifton Moor (England). Here the Scotch insurgents were defeated by the royal troops in 1745.

Clipeus. A large shield worn by the ancient Greeks and Romans, which was originally of a circular form, made of wickerwork or wood covered over with ox-hides several folds deep, and bound round the edge with metal.

Clontarf. A place near Dublin, Ireland, the site of a battle fought on Good Friday, April 23, 1014, between the Irish and Danes, the former headed by Brian Boroihme, monarch of Ireland, who defeated the invaders, after a long and bloody engagement. Brian was wounded, and soon afterwards died. His son Murchard also fell, with many of the nobility; 11,000 Danes are said to have perished in the battle.

Close Column. A column of troops in which the subdivisions are at less than full distance,—that is, less than the length of one of the subdivisions.

Clostercamp. A village of Rhenish Prussia. Here the French gained a victory on October 15-16, 1760.

Closterseven (Hanover), Convention of. Was entered into September 8, 1757, between the Duke of Cumberland, third son of George II., and the Duke of Richelieu, commander of the French armies. By its humiliating stipulations, 38,000 Hanoverians laid down their arms, and were dispersed. The duke immediately afterwards resigned all his military commands, and the convention was soon broken by both parties.

Clothing. The President of the United States is authorized to prescribe the kind and quality of clothing to be issued annually to the troops of the United States. The manner of issuing and accounting for clothing shall be established by general regulations of the War Department. The clothing of the British army is determined by a permanent board, composed of the commander-in-chief and a certain number of general officers, who act under the authority of the sovereign.

Club, To. To throw into confusion, to deform through ignorance or inadvertence. To *club a battalion*, to throw it into confusion. This happens through a temporary inability in the commanding officer to restore any given body of men to their natural front in line or column, after some manœuvre has been performed.

Coa. A river in Portugal, province of Beira. The spur which separates the Coa from the Agueda incloses the plateau of Fuentes d'Onore, famous for the battle of 1811, which was fought by Masséna with the English. See FUENTES D'ONORE.

Coat-armor. Coats of arms; armorial ensigns.

Coat of Arms. A habit formerly worn by knights over their armor. It was a short-sleeved coat or tunic reaching to the waist, and embroidered with their armorial ensigns and various devices. Any representation of the armorial devices upon such a habit; an armorial device.

Coat of Mail. A piece of armor covering the upper portion of the body, consisting of a net-work of iron rings.

Coblentz. A fortified town of Rhenish Prussia, situated at the conflux of the Rhine and Moselle, opposite the great Prussian fortress of Ehrenbreitstein. In 1794 this place was taken by Napoleon I., and made the capital of the department of the Rhine and Moselle.

Cocherel. Near Evreux, Northwest France. Here Bertrand and Du Guesclin defeated the king of Navarre, and took prisoner the Captal de Buch, May 16, 1364.

Cochin. A city of Hindostan, presidency of Madras. It was held by the Portuguese in 1508; by the Dutch in 1663; was taken by the British in 1796, and ceded to them in 1814.

Cockade (Fr. cocarde). The word signified originally a cocked-hat, or a hat with the broad flap looped up on one side, and then applied to the knot of ribbon with which the loop is ornamented. The word is now, however, restricted to signify an appendage worn on the hat of military and naval officers.

Cock-feather. In archery, the feather which stood up on the arrow, when it was rightly placed upon the string, perpendicularly upon the cock or notch.

Code. A compilation or collection of laws made by public authority, as the *Code Napoléon*.

Code. A list of signal symbols. See SIGNALING.

Codogno. A town of Italy, in the province of Milan, between the Adda and the Po. Here the Austrians were defeated by the Spaniards in 1746, and by the French in 1796.

Coehorn. So named from the military engineer, Baron Van Coehorn, who invented it. It is a small howitzer, or mortar, generally 4½ inches caliber. These implements of war, being easily moved and adjusted,

and taking little powder, are found very useful in sieges, if grouped in great numbers.

Coehorn Beds. See **ORDNANCE, CARRIAGES FOR MORTAR BEDS.**

Coeverden, Coevorden, or Koevorde. A fortified town of Holland; it was captured by the French in 1795.

Coffer. In fortification, a hollow lodgment, sunk in the bottom of a dry ditch, from 6 to 7 feet deep, and from 16 to 18 feet broad. Its length corresponds with the whole breadth of the said ditch, from side to side. The besieged generally make use of these coffers to repulse the besiegers when they attempt to pass the ditch; they are distinguished only by their length from *caponnières*. They are covered with joists, hurdles, and earth, raised 2 feet above the bottom of the ditch, so as to serve the purposes of a loop-holed parapet.

Cohort. A division of the ancient Roman armies, consisting of about 600 men, divided into centuries. It was the tenth part of a legion, and its number, consequently, was under the same fluctuation as that of the legions. In the time of the empire the cohort often amounted to 1000 men.

Coif. Was originally an iron skull-cap, worn by knights under their helmets; it was introduced before 1259. It is now especially applied in Great Britain to a cap worn by sergeants-at-law.

Coimbra. An ancient city of Portugal, capital of the province of Beira. It appears to have been originally built by the Goths; from them it passed to the Moors, from whom it was finally conquered in 1064 by Fernando the Great, aided by the gallant Cid. It was taken by the troops under the British colonel Kent, October 7, 1810.

Coin (*Fr. coin d'artilleur*). In gunnery, a kind of wedge to lay under the breech of a gun, in order to raise or depress the metal. Written also *quoin*.

Colberg, or Kolberg. A strongly fortified seaport of Prussian Pomerania. It stands on a hill, surrounded with swamps which can be laid under water, and is chiefly remarkable for the protracted sieges it has undergone. In 1102, Duke Boleslaus, of Poland, besieged it in vain. It endured long sieges in the Thirty Years' War and in the Seven Years' War, and again in 1807, when it was most gallantly defended against the French.

Colchester. The chief town in the county of Essex, England. It was taken from the Danes in 921 by Edward the Elder, who founded the castle. It was ravaged by the plague in 1348, in 1360, and again in 1665. In 1648 it was taken by Lord Goring for Charles I., but was retaken by Fairfax after a siege of 11 weeks, when the castle was dismantled.

Cold Harbor. A village of Hanover Co., Va., about 10 miles northeast of Richmond. During the civil war a series of desperate struggles took place in and around this

place (May 28–June 3, 1864) between the forces of Gens. Grant and Lee, resulting in a loss of probably 13,000 men on the Federal side.

Coldstream. A border-town of Scotland, in Berwickshire, on the left bank of the Tweed. Near this place is the famous ford where the English and Scottish armies formerly crossed the Tweed. Here Gen. Monk raised the regiment still known as the Coldstream Guards.

Coldstream Guards. A regiment in the Foot Guards, or Household Brigade, is the oldest corps in the British army except the First Foot. It was raised at Coldstream in 1660, by Gen. Monk, and was first called Monk's regiment, but when Parliament consented to give a brigade of guards to Charles II., this corps, under its present name, was included in it.

College of Arms. See **HERALD'S COLLEGE.**

Collet (*Fr.*). In gunnery, that part of a cannon which is between the astragal and the muzzle.

Colmar. A city of France, capital of the department of Haut-Rhin. This city had an active share in the civil wars under Rodolph of Hapsburg and Adolphe of Nassau; it was captured by the Swedes in 1632; by the French in 1635 and 1673. It was ceded to France by the peace of Ryswick in 1697. Occupied by the Bavarians on January 8, 1814.

Colocotroni. See **KOLOCOTRONI.**

Cologne. A fortified city of Prussia, the capital of the province of Rhenish Prussia, on the left bank of the Rhine. It is a fortress of the first rank. It was taken by the French in 1795, and assigned to Prussia in 1814.

Colombia, United States of. A republic of South America, known by this name since 1861, but formerly called New Granada. It united with Venezuela in 1819, and established one central government for the purpose of resisting Spain, but in 1829 was separated from it, and soon after another republic—that of Ecuador—was formed from it, three republics being thus formed out of what was formerly but one.

Colombo. A fortified seaport town and capital of Ceylon; it was fortified in 1638 by the Portuguese, who were expelled by the Dutch in 1666; the latter surrendered it to the British, February 15, 1796. The British troops were murdered here in cold blood by the Adigar of Candy, June 6, 1803.

Colonel. The title of the highest officer of a regiment, ranking next below a brigadier-general, and above a lieutenant-colonel. The rank of captain in the navy corresponds with this title.

Colonel, Lieutenant-. The rank next below that of colonel.

Colonia do Santissimo Sacramento (i.e., Colony of the Most Holy Sacrament). A fortified maritime town of South America, in Uruguay, opposite Buenos Ayres. On

August 31, 1845, it was taken by the English and French fleets.

Colonial Corps. Are certain regiments forming part of the regular army of the British empire, and paid for out of the imperial revenues. The native troops of India are paid from the Indian revenues.

Colorado. One of the United States, bounded on the north by Dakota and Nebraska, on the east by Nebraska and Kansas, on the south by New Mexico, and on the west by Utah. In 1857 an exploring party started through its territory, but were driven back by hostile Indians. The country is now, however, being rapidly settled, owing to its great fertility and the presence of auriferous deposits.

Color-bearer. The bearer of the colors.

Color-Guard, The. In the U. S. infantry, consists of the color-bearer and a guard of 7 corporals in each regiment. They must all be good soldiers. The color-guard is attached to the right centre company in the line, and its post on the field is one of honor as well as danger.

Colorno. A fortified castle in Italy, on the banks of the Po; it was captured by the Marquis de Maillebois, from the Austrians under the Prince of Würtemberg, in 1784.

Colors. A military term applied to banners or flags carried by each regiment of infantry. The banners of the cavalry are called standards. Each U. S. regiment has two colors, one national and one regimental.

Colors. In heraldry, the colors generally used are red, blue, black, green, and purple, which are called gules, azure, sable, vert or sinople, and purpure. Colors and metals, when engraved, are generally indicated by dots and lines: *or*, gold, by dots; *argent*, silver, is left plain; *gules*, red, is indicated by perpendicular lines from top to bottom; *azure*, blue, by horizontal lines from side to side; *sable*, black, by horizontal and perpendicular lines crossing each other; *vert*, green, by diagonal lines from right to left; and *purpure*, purple, by diagonal lines from left to right.

Color-Sergeant. Is the sergeant detailed to carry the regimental colors. He is usually selected for military deportment and soldierly bearing, and when carrying the colors is escorted by a guard of 7 corporals. In the British service he has a distinct rank, but in the U. S. service he ranks no higher than other sergeants.

Colt's Pistol. The most celebrated of modern revolvers. Invented by an American, Col. Samuel Colt; first patented in 1835, and perfected about 1845. It has kept pace with the times, and is still one of the first of its kind.

Columbia. The capital of South Carolina, situated on the left bank of the Congaree River. It was taken by Gen. Sherman's army, February 17, 1865, and was then much injured by fire.

Columbiad Gun. See **ORDNANCE, CONSTRUCTION OF.**

Column. Signifies, in military evolutions, a mass of soldiers several ranks in depth as opposed to *line*. There may be columns of brigades, of regiments, of divisions, or of companies, presenting a front of limited width, but a depth depending on the number of elements in the column. In a battalion the formation is called *open column* when the distance between the elements of the column is such as to admit of their wheeling into line; when the distance is only a few yards it is termed *close column*; when intermediate between these two, it is "column at half distance." Battalions are drawn up in column with either the right or left in front, or the battalions may be doubled upon their centres. To pass from column into line is to "deploy"; to pass from line to column is to "ploy." Sometimes the name column is given to a small army, especially when engaged in active operations. In drawing up troops for action, as a general rule, the French prefer the column, the Americans and English the formation in line.

Column, Military. Among the Romans, a column on which was engraven a list of the forces in the Roman army, ranged by legions in their proper order. They had another kind of *military column* called *columna bellica*, standing before the temple of Janus, at the foot of which the consul declared war by throwing a javelin towards the enemy's country.

Column, Triumphal. A column erected among the ancients in honor of a hero, and decorated with various kinds of crowns, corresponding to the number of his achievements in battle. Each crown had its particular name, as *vallaris*, which was filled with spikes, in memory of his having faced a palisade; *muralis*, adorned with little turrets or battlements, for having mounted an assault; *navalis*, of prows and beaks of vessels, for having vanquished at sea; *obsidionalis*, or *graminalis*, of grass, for having raised a siege; *ovans*, of myrtle, which expressed an ovation, or minor triumph; and *triumphalis*, of laurel, for a grand triumph.

Comanche Indians, or Comanches. An extremely warlike and predatory tribe of Mexico and Texas. They have a reservation in Indian Territory with some Kiowas and Apaches. See **INDIANS AND THEIR AGENCIES.**

Combat. An engagement of no great magnitude, or one in which the parties engaged are not armies.

Combustion. The phenomena attending intense chemical actions which are accompanied by heat and light. Usually restricted to the burning of bodies by their union with oxygen. It is difficult to draw the line where combustion ends and *explosion* begins.

Combustion, Velocity of. Is the space passed over by the surface of combustion in a second of time, measured in a direction perpendicular to its surface. It has been

determined that the velocity of combustion of dry French war-powder is 0.48 inch, and of English powder, which American powder closely resembles, is 0.4 inch.

Comes. Was with the Romans an officer with territorial jurisdiction in the provinces, and especially on the frontiers.

Comigne (Fr.). A shell of extreme magnitude, which takes its name from the person who originally invented it.

Comines, or Communes. A town of France, situated on the Lys, opposite the Belgian town of the same name. Near here Oliver de Clisson defeated the Flemings in 1882.

Command. In fortification, the height of the top of a parapet above the ground or another work.

Command. A body of troops, or any naval or military force or post, under the command of a particular officer. The word command, when applied to ground is synonymous with overlook; and any place thus commanded by heights within range of cannon is difficult to defend, if the enemy have been able to seize the heights.

Command. The 62d Article of War (new, 122) states who shall command when different corps of the army happen to join or do duty together, but as the wording of this article has been interpreted differently by different officers, it is thought best to give a decision rendered by President Fillmore on October 25, 1861, in General Orders from the War Department. The 62d Article of War provides that "If upon marches, guards, or in quarters, different corps of the army shall happen to join, or to do duty together, the officer highest in rank of the *line* of the army, marine corps, or militia, by commission there, on duty, or in quarters, shall command the whole and give orders for what is needful to the service, unless otherwise specially directed by the President of the United States, according to the nature of the case." The interpretation of this act has long been a subject of controversy. The difficulty arises from the vague and uncertain meaning of the words "*line of the army*," which neither in the English service nor in our own have a well-defined and invariable meaning. By some they are understood to designate the regular army as distinguished from the militia; by others as meant to discriminate between officers by ordinary commissions and those by brevet; and finally, by others, to designate an officer not belonging to the staff.

The President states that "He has maturely considered the question, and finds himself compelled to differ from some for whose opinions he entertains a very high respect. His opinion is, that although these words may sometimes be used in a different sense (to be determined by the context and subject-matter), in the 62d Article of War they are used to designate those officers of the army who do not belong to the staff, in

contradistinction to those who do, and that the article intended, in the case contemplated by it, to confer the command exclusively on the former." In the discussion which took place in 1828 relating to ordinary rank and rank by brevet, the then Secretary of War (Gen. Porter) says, "Rank in the line of the army or lineal rank, as understood by the President, is applicable to the existing organization of that portion only of the army which is intended for field operations or the exertion of physical force against an enemy. It is commonly used in contradistinction to the staff," etc. He then goes on to show that in the 62d Article it has another meaning,—House Document 68, 20th Congress, 2d session, page 13. In the same discussion, Mr. Drayton, as chairman of the Committee on Military Affairs of the House of Representatives, expresses the same opinion. He says, "Rank in the *line* of the army is conceived to be rank in a military body specially organized for the exertion of physical force, or in other words, for combating an enemy; and an officer in such a body has a direct and paramount command over the troops which compose it. The expressions '*rank in the line of the army*,' '*rank in the line*,' '*lineal rank*,' are generally used in contradistinction to staff appointments." He adds, "and to rank which confers upon officers only an occasional right to command, including brevet officers," etc. Thus we see that these gentlemen admit that these words, in their proper and usual signification, are employed to distinguish the combatant from the staff or non-combatant portions of the army.

If we look at the policy of the law, we can discover no reasons of expediency which compel us to depart from the plain and ordinary import of the terms; on the contrary, we may suppose strong reasons why it may have been deemed proper, in the case referred to by the article, to exclude officers of the staff from command. In the first place, the command of troops might frequently interfere with their appropriate duties, and thereby occasion serious embarrassment to the service. In the next place, the officers of some of the staff corps are not qualified by their habits of education for the command of troops, and although others are so qualified, it arises from the fact that (by laws passed long subsequently to the article in question) the officers of the corps to which they belong are required to be appointed from the "*line of the army*." Lastly, officers of the staff corps seldom have troops of their own corps serving under their command, and if the words "*officers of the line*" are understood to apply to them, the effect would often be to give them command over the officers and men of all the other corps when not a man of their own was present, an anomaly always to be avoided, where it is possible to do so. Whatever doubts may be entertained on this subject in regard to the offi-

cers of other staff corps, none can exist in regard to those of the Medical Department and the Pay Department. The law of 1847 expressly excludes them from command. Now the officers of these corps are not a distinct and independent body, but are a part of the army, and as they cannot command, it follows that when on duty they must be commanded.

Commandant. An officer who has the command of a garrison, fort, castle, regiment, company, etc.; called also commander.

Commander-in-Chief. The title given to the officer who has supreme command of the land or naval forces of a nation. The President is *ex officio* commander-in-chief of the army and navy of the United States.

Commands. In the military service there are two kinds, the *preparatory command*, such as *forward*, which indicates the movement that is to be executed, and the *command of execution*, such as *MARCH*, or *HALT*, or in the manual of arms, the part of the command which causes the execution. The tone of command is animated, distinct, and of a loudness proportioned to the number of men under instruction.

Each *preparatory command* is pronounced in an ascending tone of voice, but always in such a manner that the *command of execution* may be more energetic and elevated.

The *command of execution* is pronounced in a tone firm and brief. The trumpet ought to be used for giving commands whenever it can be done to advantage.

Commilitones. This word had with the Romans the same significance as the English words *comrade soldiers*.

Commissariat. A name given to the organized system whereby armies are provided with food and daily necessities. In the old Roman armies the duty of supplying troops was performed by the *questors*, who filled the place of the commissary officers of our own times. In the U. S. service this department is under charge of an officer of the rank of brigadier-general, called the commissary-general of subsistence.

Commissary. In general means any one to whom the power or authority of another is committed; used in military affairs in relation to officers who have charge of the subsistence of troops, musters, etc.

Commissary of Muster. See *MUSTER*.

Commissary Sergeants. In the U. S. service, are sergeants who are selected from the line of the army, by the Secretary of War; they must be steady and reliable men, and their duties are to assist the commissary officer in receiving, storing, preserving, issuing, selling, and accounting for the subsistence supplies at their posts, according to the regulations for the subsistence departments.

Commission. A writing, generally in the form of a warrant or letters-patent, authorizing the performance of duties, or exer-

cise of powers belonging to another. Instruments bearing this title are issued by the Executive to officers in the army or navy, who, on confirmation of their appointment, are known as *commissioned officers*. The practice of buying and selling all commissions under the rank of colonel, which formerly prevailed in the British army, was abolished in 1871.

Commissioned. One having a commission; furnished with a commission; empowered or authorized to act; as, a commissioned officer.

Common Time. In marching, the length of the direct step in common time is 28 inches, and the cadence is at the rate of 90 steps per minute.

Communication, Line of. A fantastical name applied by Belidor to mines with immense charges, which he proposed to use for the destruction of countermines, and which were used successfully in the attack of Schweidnitz, under Frederick II.

Commutation. Is the conversion of allowances, such as fuel, forage, and quarters, into their money value.

Comorn. A royal free town of Hungary, 48 miles from Buda. Its citadel is considered one of the strongest in Europe. Its works and intrenchments extend about 7 miles along the banks of the rivers (Waag and Danube), and it requires for its defense at least 16,000 men and 400 pieces of artillery. It has the reputation of being impregnable, and justified it in the Hungarian war, for the Austrians besieged it from October, 1848, to September, 1849, and only became masters of it at last in virtue of a capitulation.

Compagnies de Discipline (Fr.). "Companies of discipline." These companies were created by Napoleon I. in 1802; the basis of their actual organization was laid by a royal order, dated April 1, 1818. This order fixes the number of companies at 10, 6 of fusileers and 4 of pioneers, the former to be composed of soldiers of the army who were guilty of indiscipline, and the latter to be formed of men of the former who were deemed incorrigible. The number of companies is now reduced to 7, who are stationed in Algeria. There are also 4 companies similarly organized which are stationed in the French colonies.

Compagnies d'Ordonnance (Fr.). The name of a corps of cavalry, which was organized in France by Charles VII. in 1489; it numbered 16 companies, and the entire strength was 9600 men. This was the first regular cavalry organized in France.

Company (Fr. *compagnie*). In military organization, is a body of men commanded by a captain, and forming an aliquot part of a regiment or battalion. In the British service a full company consists of about 100 men, and a regiment of infantry generally comprises 10 or 12 companies, or if there is more than 1 battalion, each has this number of companies. The captain of each com-

pany is assisted by 2 subalterns. In the U. S. army each regiment of infantry is divided into 10 companies, and each company has a captain and 2 lieutenants. The artillery and cavalry regiments are divided into 12 companies each, and the former has a captain and 4 lieutenants to each company. See ORGANIZATION.

Company Column. The successive improvements that have been made in fire-arms during the last hundred years have been followed by a gradual diminution of the depth of tactical formations, until to-day the "open order," or the formation as skirmishers, is the only one adopted under the fire of the enemy. In the most recent development of the "open order" the company, composed of 250 men, is recognized as the "fighting unit," while the battalion, composed of 4 companies, is regarded as the "tactical unit,"—that is, the smallest body of men that can be safely employed independently.

The adoption of breech-loaders has not changed the principles of strategy and grand tactics, nor has it diminished the number of lines in which armies are drawn up to give and receive battle. It has simply demonstrated the impossibility of attacking positions in battalion columns, and, as a consequence, has necessitated a division of the troops into smaller fractions, which, under fire, can be moved with the greatest rapidity and least exposure, thereby insuring the least loss of life. Hence the formation of troops in "company column" in the German and other European armies.

In the German army, the company is formed in three ranks; the tallest men are in the front rank; the most adroit and best shots are selected for the third rank, because the special duties of this rank require these qualities; the distance between ranks is 2 feet. The company is divided into divisions (or platoons). If the divisions consist of 20 or more files, they are divided into subdivisions (or half platoons); the subdivisions are again divided into sections of not less than 4, nor more than 6 files. If the company be of full strength, it will have a front of 72 files; each division will contain 36 files; each subdivision 18 files; and each section 6 files. The battalion consists of 4 companies.

The "company column" is formed in the following manner: The battalion being in line, at the command to "form company column," the third rank of each even division of the right wing faces about, marches 12 paces to the rear, halts, and faces to the front; the first and second ranks of the uneven divisions face to the left, and place themselves 6 paces in rear of the first and second ranks of the even divisions; the third rank of the uneven subdivisions faces to the left, and, filing in front of the third rank of the even division, forms with it a third division in double rank. The movement is executed in the uncadenced step. The column when formed consists practically of 3

platoons in double rank. In the left wing the movement is similarly executed; the even subdivisions playing in rear of the uneven subdivisions. The third division of each column is called the "shooting division."

In the French army the company is formed in 2 ranks, and is normally divided into 4 sections, the first two of which constitute the first platoon, the last two the second platoon. The "company column" is always formed on the second section from the right, which stands fast; the distance between sections is 6 paces.

The "company column" in Italy, Austria, and Russia, as in France, varies very slightly from the German.

With a battalion of 8 or 10 companies, subdivisions may be dispensed with, and, so long as this organization is retained in England and America, the "company column" will not therefore become a necessity. Should the regimental system of 8 battalions, of 4 companies each, be adopted, all of the advantages claimed for the "company column" can be secured by adopting the double column of fours for each company. —*Armies of Asia and Europe, UPTON.*

Compass, Prismatic. A pocket instrument for measuring horizontal angles by means of the magnetic meridian. It is much employed in the military service for sketching the general features of a country, and in reconnoissances. It consists of a small glass-covered box containing a magnetized needle attached to a graduated card. A sight-vane with a fine wire stretched longitudinally in the slot is hinged to one side of the box. On the opposite side is a prism. To use it the sight-vane is turned up to the perpendicular. The eye is applied to the prism, and the wire directed on the object. The division in the card coinciding with the reflection of the wire gives the angle with the meridian.

Compassionate Allowances. In the British service, are grants of allowances which are made to the legitimate children of deceased officers of the land forces in all cases in which the widow of the officer would be entitled to be placed on the pension-list, provided it be shown that they are deserving objects of the sovereign's bounty, and are in distressed circumstances.

Compiègne. A town of France, department of Oise. It was besieged by the English in 1480, who failed to capture it owing to the brave defense made by its governor, Flavia. Joan of Arc, who came to the assistance of this town, was taken prisoner by the English besiegers. The emperor Napoleon III. and the king of Prussia met here on October 6, 1861.

Complement of the Curtain. That part in the interior side of a fortification which makes the demi-gorge.

Complement of the Line of Defense. The remainder of the line of defense after the angle of the flank is taken away.

Compliment. The military mark of re-

spect shown by a body of troops to official personages, to an officer, or to another body of troops.

Compositions, Pyrotechnic. See **PYROTECHNY**.

Compound Armor. See **ARMOR PLATES**.

Compression Strain. See **ORDNANCE, STRAINS UPON**.

Compulsion, or Inevitable Necessity. Is a constraint upon the will whereby an officer is urged to that which his judgment disapproves, and which, it is to be presumed, his will (if left to itself) would reject. As punishments are, therefore, only inflicted for the abuse of that free will which God has given to man, it is highly just and equitable that an officer should be excused for those acts which are done through unavoidable force and compulsion.

Comrade. A soldier who acts as the friend of another soldier, rendering him friendly services, etc. Each soldier generally has one special friend who is recognized as his comrade. The term comrade is also extended so as to include all the members of a particular corps, branch of the service, or the army generally.

Concarneau. A maritime town of France, department of Finistère; it was taken by Du Guesclin in 1373, and by the Leaguers in 1576. The town is defended by a fort and surrounded by ancient walls.

Concave Order of Battle. See **ORDER OF BATTLE, CONCAVE**.

Concepcion. A port of Chili, capital of a province of the same name. In 1554, 1555, and 1603, it was taken and burnt by the Araucanians. A portion of it was again devastated by the Araucanians in 1823.

Concord. A town of Middlesex Co., Mass., 11 miles from Boston. Here, on April 19, 1775, one of the first conflicts took place between the Americans and the British troops. A monument is erected at this place to commemorate the event.

Concrete. A coarse building mortar, containing broken stone, gravel, etc., used much in fortifications.

Condé. A town of France, in the department of the North. It is strongly fortified and has a military arsenal. In 1793 this town was taken by the Austrians.

Condemned Property. In the military service, property must be condemned by an inspector before it can rightfully be destroyed.

Condottieri. A name given in the 14th century to the leaders of certain bands of military adventurers in Italy, who, for booty, offered their services to any party in any contest, and often practiced warfare on their own account purely for the sake of plunder. The *Compagnies Grandes* in France at about the same period were somewhat similar to the condottieri, and were so powerful at one time that in 1361 they routed the king's forces at Brignais, and slew Jacques de Bourbon, constable of France.

Conduct Unbecoming an Officer and a

Gentleman. See **UNGENTLEMANLIKE OR UNOFFICERLIKE**, and **APPENDIX, ARTICLES OF WAR**, 60 and 61.

Confederate Projectiles. See **PROJECTILE**.

Confederate States of America, or Southern Confederacy. The efforts of the Southern States for the extension of slavery, and the zeal of the Northern States for its abolition, with the consequent political dissensions, led to the great secession of 1860-61. On November 4, 1860, Abraham Lincoln, the Republican candidate, was elected President of the United States. Hitherto, a President in the interest of the South had been elected. On December 20, South Carolina seceded from the Union; and Alabama, Florida, Mississippi, Georgia, Louisiana, Texas, Virginia (except West Virginia), Arkansas, Tennessee, and North Carolina seceded early in 1861. Jefferson Davis was inaugurated President of the Southern Confederacy at Montgomery, Ala., February 18, 1861. For important events of the civil war which ensued, see the different States of America throughout this work, and the names of battles, etc., which were fought during this war. On the 20th day of August, 1866, the President (Andrew Johnson) proclaimed the insurrection at an end, and that peace, order, tranquillity, and civil authority existed throughout the whole of the United States.

Confederation of the Rhine. The league of the German states, formed by Napoleon Bonaparte, July 12, 1806, when he abolished the Holy Roman Empire, and the emperor of Germany became emperor of Austria. In December it consisted of France, Bavaria, Würtemberg, Saxony, and Westphalia; 7 grand duchies, 6 duchies, and 20 principalities. The princes collectively engaged to raise 258,000 troops to serve in case of war, and established a diet at Frankfort. This league terminated with the career of Bonaparte in 1814. It was replaced by the *Germanic Confederation*, and it, in its turn, was replaced by the *North German Confederation*.

Confiscation. The appropriation to the public use of private property. A right which is conferred under certain circumstances by the laws of war. See **CONTRABAND OF WAR**.

Confians (near Paris), Treaty of. Between Louis XI. of France and the Dukes of Bourbon, Brittany, and Burgundy, October 5, 1466. By its provisions Normandy was ceded to the Duke of Berry, and an end was put to the "War of the Public Good." It was confirmed by the treaty of Peronne, 1468.

Congreve Rocket. See **ROCKET**.

Coni, or Cuneo. The capital of a province of the same name in Piedmont. It was once a fortified place, and had to undergo several sieges. After being taken and retaken, the victory of Marengo gave it into the hands of the French, who demolished

the fortifications and turned them into promenades.

Connecticut. One of the original States of the American Confederation, and the most southwestern of the New England States. The country was early explored by the Dutch, but the first permanent settlements were made by English emigrants in 1684. In 1687 the settlers were much annoyed by Indians, who were shortly afterwards subdued, however, in engagements at Mystic and Fairfield, and never after gave any serious trouble. The State took an active part in the cause of American independence, and also in the late war for the Union, and throughout both these eventful contests she sustained eminent distinction as well for the wisdom of her statesmen as for the bravery and patriotism of her soldiers.

Conquer. To gain or acquire by force; to take possession of by violent means; to gain dominion over; to subdue; to reduce, etc. To gain the victory; to overcome.

Conqueror. One who conquers; one who subdues and brings into subjection or possession by force or by influence.

Conquest. The act of conquering or acquiring by force; the act of overcoming or subduing opposition by force; subjugation; victory.

Conquistores. So were called the recruiting officers of the Romans.

Consarbruck. A village of Rhenish Prussia where the French were defeated by the Duc de Lorraine, August 11, 1675.

Conscription. A system of enrolling men for military service, which is in vogue in France and some other foreign countries. Voluntary enlistments being so very few, the compulsory system of keeping up the armies is deemed indispensable. An account is kept of all the youths who reach the age of 20 in one year, and out of these the number required for the army is drawn by lot.

Cosigne (Fr.). Parole or countersign.

Constable. The title in the Middle Ages of the highest military officer in France under the king. The term comes from the low Latin phrase *comes stabuli*, count of the stables.

Constable of the Tower. In England, is a general officer who has the chief superintendence of the Tower, and is lord-lieutenant of the Tower Hamlets. He holds his appointment by letters-patent from the sovereign, and is not removable at pleasure.

Constantine, or Constantina. A fortified city of Algeria, capital of a province of its own name. It stands on the site of the ancient Cirta, celebrated as the bulwark of Numidia. It is built upon a high rock, formed into a species of peninsula by the Rummel. It was besieged by the French in 1836, but held out till October, 1837, when it was taken by assault.

Constantinople. A celebrated city of Turkey in Europe, the capital of the Ottoman empire. It was formerly called *Byzantium*, but having been rebuilt by the em-

peror Constantine in 328, it received his name. No city in the world has been subjected to as many numerous and celebrated sieges, yet it was only taken twice,—by the Crusaders in 1204 (held by them till 1261), and by the Turks under Mohammed II., May 29, 1453,—an event which completed the extinction of the Roman empire in the East.

Contest. In a military sense, to struggle to defend; as, the troops contested every inch of ground. Earnest struggle for superiority, defense, or the like; strife in arms.

Continental. A term adopted by the Americans in the Revolutionary war in contradistinction to British.

Contingent. This term is applied to the quota of troops furnished to the common army by each member of a confederation of states; the proportion of troops or money furnished by each party to an alliance.

Contingent. In the British service, the sum paid monthly to each captain of a troop, company, or battery, to defray the expense of stationery, the care of arms, and other minor demands. A contingent account is also the account, sent in by a staff-officer, of money expended for miscellaneous purposes.

Contours. Are the lines in which a site or ground surface is cut by horizontal planes, usually taken at equidistances.

Contraband of War. Are such articles as a belligerent has by the law of nations the right of preventing a neutral from furnishing to his enemy. Articles contraband of war are, in general, arms and munitions of war and those out of which munitions of war are made. Contraband articles are subject to confiscation; but very arbitrary interpretations have been affixed to the term by powerful states, when able to enforce them by arms. Thus, provisions are held contraband of war when it is the object to reduce the enemy by famine. But with respect to these and other articles not in their nature contraband, it seems to be the practice that the belligerent should purchase them from the neutral for a reasonable equivalent, instead of confiscating.

Contramure. In fortification, is a wall built before another partition-wall to strengthen it, so that it may receive no damage from the adjacent buildings.

Contravallation. In fortification, is an intrenchment formed in the same manner as the line of circumvallation, to defend the besiegers against the enterprises of the garrison. An army forming a siege lies between the line of circumvallation and contravallation. The trench of this line is towards the town, at the foot of the parapet, and is never made but when the garrison is numerous enough to harass and interrupt the besiegers by sallies. This line is constructed in the rear of the camp, and by the same rule as the line of circumvallation, with this difference, that, as it is only intended to resist a body of troops much inferior to a force which might attack the

circumvallation, its parapet is not made so thick, nor the ditch so wide and deep.

Contre-forts (*Fr.*). Brick-work which is added to the revetment of a rampart on the side of the terre-plein, and which is equal to its height. Contre-forts are used to support the body of earth with which the rampart is formed. They are likewise used in the revetments of counterscarps, in gorges and demi-gorges, etc. Contre-forts likewise form a part of the construction of powder-magazines, which are bomb-proof.

Contreras. A celebrated battle-field of Mexico, about 14 miles south of the capital. Here, on August 19 and 20, 1847, the American forces under Gen. Scott defeated and totally routed, with loss of all his artillery, the Mexican general Valencia.

Contribution. In a military sense, is an imposition or tax levied on the people of a conquered town or country.

Control Department. In the British service, is the department which performs all the administrative duties of the army, in fact, all duties neither combatant, educational, nor scientific. It has a sub-department which performs all work connected with supply and transport, and to which is attached the "Army Service Corps," a body of men officered by the control department, and employed as butchers, bakers, military train, dispensers, hospital attendants, and those engaged in non-combatant duties generally.

Controller. In the British service, the highest grade in the control department. The officers holding it—three in number—rank with major-generals. A *deputy controller* belongs to the second grade in the control department. Officers holding it rank with lieutenant-colonels.

Convalescent. A soldier who though discharged from hospital is not sufficiently recovered to do duty.

Convention. In a military sense, is an agreement made between hostile armies for some well-defined purpose, such as the evacuation of a fort, territory, etc. One of the most celebrated conventions of modern times was that of Cintra (1808), between the French and the English generals.

Conversion. A change of front, as of a body of troops attacked in the flank.

Conversion, Bridge by. See **PONTONS**.

Converted Guns. A term applied to cast-iron guns lined with wrought iron or steel tube. See **ORDNANCE, PALLISER AND PARSONS GUNS**.

Convex Order of Battle. See **ORDER OF BATTLE, CONVEX**.

Convoy. In the military service, is a train of wagons laden with provisions or warlike stores, or a detachment of troops appointed to guard such a train.

Cooling of Cannon. See **ORDNANCE, CONSTRUCTION OF**.

Coptic Legion. In 1799 the French army in Egypt not receiving any reinforcements, grew weaker every day through loss in com-

bat and disease, when Gen. Kleber, who commanded after the departure of Napoleon, formed a corps of Copts, or native Christians, about 600 strong, which was known by this name. They were armed the same as the French troops.

Cordon. In military operations, is a line of sentries inclosing or guarding any particular space of ground, to prevent the passage of persons other than those belonging to the army. The word also applies in fortifications to a row of stones made round on the outside, and placed between the termination of the slope of the wall, so as not to be offensive to the eye.

Córdoba. A city of Spain, capital of the province of the same name, founded about 162 B.C.; taken by the Goths in 572, and made the capital of an Arab kingdom in 756. It was rescued from the Arabs by Ferdinand III. of Castile in 1236; was taken by the French under Dupont and disgracefully ravaged, June 8, 1808; surrendered to Joseph Bonaparte, January, 1810, and abandoned by the French in 1813.

Corduroy Road. A roadway formed of logs laid side by side across it, as in marshy places; so called from its rough or ribbed surface, resembling corduroy. See **CORWAY**.

Cordway. This way or road is made over extensive marsh tracks, and is constructed as follows, from the description of material usually abounding in such places: Trees and poles of almost any description will be found to answer. Cut as many as is thought requisite. Divide them into three classes,—*ground-poles*, *cross-poles*, and *stringers*. The ground-poles should be the largest and heaviest. The cross-poles are comparatively short lengths, and lie across the ground-poles with their ends projecting some distance beyond. They are laid closely together, and then secured and bound down by the stringers which lie on them. A tree-nail driven in here and there serves to keep all in place by nipping the cross-poles tightly. The ends of the ground-poles and stringers may be either scarfed and tree-nailed, or laid side by side and tied with withers or strips of suitable bark. This road is quickly made and found very useful in transporting the supplies of an army over a wet, marshy country.

Core. When cannon are cast hollow, after the plan of Rodman, a core is used to make the bore. It consists of a hollow cast-iron pipe, fluted on the outside, called the *core-barrel*. This is wrapped with rope and the molding sand is plastered over the rope. A water-pipe entering the core-barrel and reaching nearly to the bottom, and another leaving it near the top, are used to maintain a circulation of water through it, thus cooling the casting from the interior.

Corea, or Korea. Is an extensive peninsular country in Northeastern Asia, whose limits are not accurately known. It is bounded east by the Sea of Japan, south by

the Strait of Corea, and west by the Whanghai, or Yellow Sea. Corea was first subjected by the Tartars, but in about 1120 B.C. the Chinese appear to have gained possession of the country. The Japanese conquered and held it between the years 1692 and 1698, when it again fell under the sway of China, and still pays a small annual tribute to the emperor.

Corfu. The capital and principal town of the Ionian Islands. It was first occupied by the Phœcians, and then by the Liburnians; but the accounts of it are somewhat mythical until its settlement by the Corinthians about 784 B.C., and through its commerce it soon after acquired a considerable importance. It soon quarreled with the mother-country, and after many vicissitudes of fortune passed under the dominion of the Romans about 229 B.C. The town is defended by two fortresses, and garrisoned by British troops since 1864, though belonging to the kingdom of Greece.

Corinth. An ancient and celebrated city of Greece, the capital of a department of the same name, situated on the Isthmus of Corinth. It was totally destroyed by L. Mummius, the Roman consul, and burnt to the ground, 146 B.C. It remained in ruins for a century, and was rebuilt in the year 46 by Julius Cæsar, after which it again arose to be a populous and prosperous city. After the taking of Constantinople it fell into the hands of the Turks, from whom it was retaken in 1687 by its former possessors, the Venetians. In 1715 it was again possessed by the Turks, who held it till 1823, when it was taken by the Greeks.

Corinth. A village in the northeast of Mississippi, about 90 miles east of Memphis. It was evacuated by the Confederates under Beauregard, May 29, 1862, and next day occupied by the Federal forces under Gen. Halleck. The Confederates, under Gens. Van Dorn, Price, and others, attempted to take this place, but they were thoroughly defeated after several desperate struggles by Gen. Rosecrans, October 3-5, 1862. The Confederate loss in prisoners alone was nearly 3000.

Corinthian War. Began 395 B.C.; received this name because it was carried on mostly in the neighborhood of Corinth; waged by a confederacy of the Athenians, Thebans, Corinthians, and Argives against the Lacedæmonians. It was closed by the peace of Antalcidas, 387 B.C.

Corium. Leather body-armor, formed of overlapping leaves or scales, worn by Roman soldiers, and those of other nations. Its use was continued in England till the reign of Edward I.

Cork. A city of Ireland, capital of the county of the same name; built in the 6th century, it was garrisoned by Henry II., 1172; taken by Cromwell in 1649. The Earl of Marlborough besieged and took this city from King James's army, 1690.

Cornet (Ital. *cornetta*, a "small flag").

Is the lowest grade of commissioned officers in the cavalry, equivalent to ensign in the infantry, his duty being to bear the standard. In the U. S. army there are no cornets.

Cornet. In the military history of the ancients, an instrument much in the nature of a trumpet: when the cornet only sounded, the ensigns were to march alone without the soldiers; whereas, when the trumpet only sounded, the soldiers were to move forward without the ensigns. A troop of horse was so called.

Cornette-blanche (Fr.). An ornament which in ancient times served to distinguish French officers who were high in command. It was worn by them on the top of their helmets. It likewise meant a royal standard, and was substituted in the room of the royal pennon. The cornette-blanche was only unfurled when the king joined the army; and the persons who served under it were princes, noblemen, marshals of France, and old captains, whose orders came direct from the king.

Coroneia. An ancient town of Bœotia. The Athenians were here defeated by the Bœotians, and their leader, Tolmides, slain, 447 B.C. The Athenians, Thebans, Argives, and Corinthians having entered into a league, offensive and defensive, against Sparta, Agesilaus, after diffusing the terror of his arms from his many victories, even into Upper Asia, engaged the allies at Coroneia and achieved a great victory over them, 394 B.C.

Corporal. In the military service, is a non-commissioned officer next in rank below a sergeant. He is distinguished by two chevrons worn on the arm.

Corporal, Lance. A private soldier who acts as corporal. He wears one chevron, but has no increase of pay.

Corporal-Major. In the British service, a troop corporal-major is the non-commissioned officer of the highest rank in a troop of the Household Cavalry; his position and authority are the same as those of a color-sergeant of infantry. A regimental corporal-major is the non-commissioned officer of the highest rank in each of the three regiments of Household Cavalry, and corresponds to a sergeant-major of infantry.

Corporal's Guard. Used to indicate a detachment of several men under arms. May be applied to a squad equal to that usually placed under the charge of a corporal for drill, police, guard duty, etc. Generally made use of in a derisive manner.

Corps. A body of men; especially a body of troops; an organized part or division of an army.

Corps d'Armée. In the military organization of large armies two or more divisions form a *corps d'armée*, or army corps, which is complete in itself as an army, with everything needed for service. In European states, where large standing armies are kept, this custom of dividing them into corps, each under an officer of very high rank, and quartering them in different provinces, is followed even in times of peace.

Correspondence, Official. Is correspondence carried on officially between military officers and various departments of the service, such as orders, reports, letters, indorsements, etc. All official correspondence between the heads of the different departments of the staff of any command and its commander must pass through the adjutant-general, assistant adjutant-general, or adjutant of the command, as the case may be. Communications to or from a commander and those under his command must pass through the adjutant-general, assistant adjutant-general, or adjutant on duty with it; excepting only such communications between a disbursing officer and the chief of his particular branch of the staff as relate exclusively to the ordinary routine of business in their own department. All communications, whether from an inferior to a superior, or *vice versa*, are, as a general rule, to be passed through the intermediate commanders. The same rule governs in verbal applications: for example, a lieutenant seeking an indulgence must apply through his captain, the captain through the adjutant, and so on. All correspondence relating to or involving the *personnel* of the army when forwarded to the Secretary of War for his orders, must be forwarded through the adjutant-general for the consideration of the general of the army.

Corridor. The covered way lying round the whole compass of the fortifications of a place.

Corselet. A little cuirass, or piece of armor to cover the front of the body, worn formerly by pikemen.

Corsica. An island in the Mediterranean, held by the French. This island has been successively occupied by the Carthaginians, Romans, Goths, Saracens, Franks, the popes, and Genoese; and lastly by the French, in whose possession it now remains, and to whom it was ceded by the Genoese in 1768. This island was held by the British from June, 1794, to Oct. 22, 1796.

Cortege. The official staff, civil or military.

Corus, Corupedion, or Cyropedion. A plain in Phrygia, Asia Minor, where the aged Lysimachus was defeated by Seleucus, and slain, 281 B.C. These two were the only survivors of Alexander the Great's generals.

Corygaum. An insignificant village in the presidency of Bombay; historically interesting in connection with the final subjugation of the Peishwa of the Mahrattas. On Jan. 1, 1818, it was defended for nine hours by a mere handful of men under Capt. Staunton, against a native force numbering at least 8000 infantry and about 20,000 cavalry, the struggle terminating in the repulse of the assailants after terrible slaughter.

Cossacks (Russ., *Kasaks*). A military organization of irregulars in the Russian service. They contribute much to the military strength of Russia; but several insurrections, of which the most alarming was that of 1778, have taken place since they

became subjects to the Russian government.

Cossova. A plain in Servia. Here Amurath I. totally defeated the Christian army (Servians, Hungarians, etc.), September, 1889; but was himself killed by an expiring soldier. At this place, in 1448, John Huniades was defeated by a Turkish army four times larger than his own.

Costa Rica. The most southern state of Central America; bounded north by Nicaragua, northeast by the Caribbean Sea, south by New Granada, and south and west by the Pacific. The government of Costa Rica was established in 1832, and is accounted as the best and most liberal in Central America.

Coston's Lights. Colored pyrotechnical compositions used for night signaling. Sometimes used in the form of a pistol cartridge.

Cotice, or Cost. In heraldry, one of the diminutives of the bend. It is a fourth part of the bend, and is usually borne in couples, with a head between.

Couchant. In heraldry, a beast lying down, with his head up, is *couchant*. If the head is down, he is *dormant*.

Coulmiers. A village 10 miles west of Orleans, Central France. Here the Bavarians under Gen. Von der Tann were defeated by the French army of the Loire under Gen. d'Aurelle de Paladines, who took about 2000 prisoners, Nov. 9, 1870, and regained Orleans.

Council of War. A conference of officers in military or naval warfare, on some matter in which the commander wishes to fortify his judgment by an appeal to that of others. The commandant of a garrison generally solicits the opinion of a council of war before surrendering to besiegers.

Counter-approach. A trench by which the besieged proceeds to meet the approaches of the besiegers. It is generally zigzag.

Counter-arch. A vertical arch connecting the top of the counter-forts.

Counter-battery. A battery which returns the fire of an opposing battery.

Counter-changed. In heraldry, when several metals and colors are intermixed, one being set against the other, they are said to be counter-changed.

Counter-forts. Interior buttresses constructed for the purpose of strengthening masonry revetments.

Counter-guards. Sometimes called *couvre-faces*, are works constructed in permanent fortifications to cover a bastion or demi-lune. They consist of two faces forming a salient angle.

Counterhurters. In gunnery, are pieces of iron bolted to the rails on which the gun-carriage moves to check it in front and rear. See *ORDNANCE, CARRIAGES FOR, SEA-COAST CARRIAGES*.

Countermand. To revoke, as a former command; to direct or order in opposition to an order previously given, thereby annulling it, or prohibiting its execution.

Countermarch. A change of direction of a company or battalion in column from front to rear, by a flank movement, retaining the same ground.

Countermine. A gallery underground so constructed as to facilitate the formation of mines, by means of which those of the enemy may be reached and destroyed.

Countermine. To oppose by means of a countermine; to frustrate the designs of, by sinking a well and gallery in the earth, in search of an enemy's mine.

Counter-parole. A word given in any time of alarm, as a signal.

Counterpoise Carriage. A gun-carriage which, applied to a gun mounted in *barbette*, allows it to recoil behind the parapet or other shelter, and by means of a counterpoise brings it, or assists in bringing it, again into *battery* after it has been loaded. Among the best known of these carriages are *Moncrieff's* and *King's*,—the former invented by Capt. Moncrieff, of the British army, and the latter by Capt. W. R. King, of the U. S. Engineers. In Moncrieff's carriage the counterpoise is a heavy weight between the cheeks of the top carriage. In King's the weight is in a well under the pinle-block, and is attached to the carriage by a wire cable.

Counter-round. A body of officers, whose duty it is to visit and inspect the rounds and sentinels.

Counterscarp. In fortification, is the vertical or nearly vertical side of the ditch nearest to the besiegers, and opposite to the scarp or escarp. It is generally faced or *revetted* in permanent works, to render the descent into the ditch difficult.

Counterscarp Galleries. Galleries under the counterscarp at the salients, for the purpose of flanking the ditch.

Countersign. In military discipline or manoeuvres, is a watch-word given by the commanding officer of an army or garrison daily, in order that a friend may be distinguished from an enemy. The countersign is given to sentinels, and others who are immediately concerned. It is given in garrison to prevent unauthorized persons from passing the guards. The countersign is usually the name of a battle.

Counter-swallowtail. In fortification, is a kind of an outwork very much resembling a single tennail.

Counter-trenches. Are trenches made against the besiegers, which consequently have their parapets turned against the enemy's approaches, and are enfiladed from several parts of the place on purpose to render them useless to the enemy, if they should chance to become masters of them; but they should not be enfiladed or commanded by any height in the enemy's possession.

Counter-vair. A heraldic fur. It differs from *vair* by having its cups or bells of the same tinctures placed base against base, and point against point. The tinctures are *or* and *azure*.

Coup de Grace. A finishing or decisive stroke.

Coup de Main. A sudden and vigorous attack, for the purpose of instantaneously capturing a position.

Coup d'Œil. The gift of rapidly grasping and turning to the best account the contingencies of war, and the features of the country which is its scene.

Couped (Fr. *coupé*). A term in heraldry, used to describe the head or any limb of an animal cut off from the trunk, and smooth. When crosses, bends, bars, etc., are cut so as not to touch the sides of the escutcheon, they are also said to be couped.

Coupe-gorge (Fr.). Literally means cut-throat. It is used in a military sense to signify any spot or position which affords an enemy so many advantages that the troops who occupy it must either surrender or be cut to pieces.

Coupures. In fortification, are passages cut through the glacis, of about 12 or 16 feet broad, in the re-entering angle of the covert way, to facilitate the sallies of the besieged. They are sometimes made through the lower curtain, to let boats into a little haven built in the *re-entrant* angle of the counterscarp of the outworks.

Courçon (Fr.). A long piece of iron which is used in the artillery and serves to constrain or tighten cannon.

Courier. In a military sense, means a messenger sent post or express to carry dispatches of battles gained, lost, etc., or any other occurrences that happened in war.

Courland. A duchy of Livonia, subjected to Poland in 1582, conquered by Charles XII. of Sweden in 1701; Ernest Biren, duke, 1737; his son, Peter, 1769; annexed to Russia, March, 1795.

Couronnement, or Couronnement. In fortification, implies the most exterior part of a work when besieged.

Courtel. A military implement which served both for a knife and a dagger.

Court-martial. In the army, a tribunal for the examination and punishment of offenders against martial law or against good order and discipline. Under the present construction of law, members of courts-martial become judges and jurors. In ancient feudal times the lords had arbitrary power over vassals who held their lands by tenure of military service, and punished them as they saw fit, and courts of chivalry took cognizance of offenses committed by the nobles. With the decline of feudalism the system of military despotism became obnoxious to the English people, and although the necessity for a standing army was admitted in time of peace, it could only exist with the consent of Parliament. The first military act passed after the accession of William to the throne of England is believed to have laid the foundation of the present system of courts-martial, which has also been adopted to a certain extent in the American service. Parliament having been

notified that a body of English and Scotch troops who were ordered to Holland had mutinied, that body passed, on April 8, 1689, an act for punishing mutiny, desertion, etc., which has been renewed annually by Parliament to the present day. It authorized the king to grant commissions to certain officers to hold courts-martial for the trial of crimes committed by officers and soldiers. Similar acts were at different times passed in relation to offenses committed in the navy. A court-martial is a court of limited and special jurisdiction called into existence by force of express statute for a special purpose, and to perform a particular duty; and when the object of its creation is accomplished it ceases to exist. The law presumes nothing in its favor. He who seeks to enforce its sentences, or to justify its conduct under them, must set forth affirmatively and clearly all the facts which are necessary to show that it was legally constituted, and that the subject was within its jurisdiction. And if in its proceedings or sentence it transcends the limits of its jurisdiction, the members of the court and its officer who executes its sentence are trespassers, and as such are answerable to the party injured in damages in the courts of common law. Courts are classed into general, garrison, summary, regimental, and field-officers', according as the authority convening, the nature of the offenses to be inquired into, the punishment to be awarded, or other circumstances may determine. See APPENDIX, ARTICLES OF WAR, 72 to 114; also TRIAL.

Court of Honor. Is a military court authorized by the regulations of the Prussian service, convened for the purpose of sustaining the honor of the service and of individuals, and of punishing officers who may be found guilty of conduct deviating even in the least from the principles which actuate military men as men of honor. The court of honor of a regiment consists of all commissioned officers in it, except the prosecutor, the defendant, near relations, officers appearing as witnesses in the case, officers on leave, detached service, under arrest, or awaiting trial before any court; and has for its regular business management a council of honor, consisting of the senior captain, senior first lieutenant, and senior second lieutenant. The court has jurisdiction over all acts or omissions (not provided for by any fixed laws) which are unofficerlike or ungentlemanly in their nature, particularly such as contracting debts, improper choice of society, excessive use of intoxicating liquors, gambling, quarrels, carelessness or neglect of duty, and scandal. With the exception of general officers, all officers of the standing army, the reserve, the landwehr, and those of the retired list are subject to the laws of the court of honor. The court to investigate the conduct of a field-officer is made up of the field-officers of the division to which the officer belongs.

Court of Inquiry. In the military ser-

vice of the United States, is a legally constituted court which may be ordered by the President or by any commanding officer to examine into the nature of any transaction of, or accusation or imputation against, any officer or soldier upon a demand by the officer or soldier whose conduct is to be inquired into. It may consist of one, two, or three officers, and a judge-advocate or other suitable person as recorder, all of whom are sworn. It has the same powers as a court-martial to summon witnesses and to examine them on oath. Courts of inquiry cannot award punishment, but must report to the officer by whose order they were assembled. (See APPENDIX, ARTICLES OF WAR, 115 to 121; also INQUIRY, BOARD OF.) In the British service courts of inquiry are not regulated by any statute or standing regulation, but depend on the will of the sovereign, or of the superior officer convoking the court, both as to the officers who may compose it, and as to every particular of its constitution. It is not a judicial body, but is rather a council, having no power to compel the attendance of witnesses not of the army or navy, nor to administer oaths.

Courtrai. A fortified town of Belgium, on the river Lys. Here Robert, count of Artois, who had defeated the Flemings in 1297, was defeated and slain by them, July 11, 1302. The conflict was named the "Battle of the Spurs," from the number of gilt spurs collected.

Coussinet à Mousquetaire (Fr.). A bag formerly worn by a French soldier on his left side beneath the cross-belt. It hung on a hook near the butt of his musket. It likewise signifies a wedge used to support the mortar in its frame.

Coutere. A piece of armor which covered the elbow.

Coutras. In Southwestern France. Here Henry of Navarre totally defeated the Duc de Joyeuse and the Royalists, October 20, 1587.

Cover. Natural or artificial protection from the fire of the enemy, the former being afforded by hills, woods, banks, walls, etc., the latter by fortifications constructed for the purpose. To cover is, in military language, to stand exactly behind another man.

Covering. Standing exactly in front or in rear of another man or an object.

Covering-fascines. Are those made of stout picket stuff, not less than 1 inch thick, without any mixture of small brush-wood. They may be used in place of planks for the superstructure of wooden bridges; and may also be used, if no stout planks or spars are to be had, for the roofs of field powder-magazines. They may be made of the usual diameter of 9 inches. Their length will depend upon the special purpose for which they are intended. The withes should be particularly good.

Covert Way, or Covered Way. Is a road or broad path outside the fosse or moat of a fortified place, between the counterscarp

and the glaciis. It is usually about 80 feet wide, and sunk so far below the crest of the glaciis that soldiers standing upon it cannot be seen by the besiegers; hence the name. The covert way is broad enough to allow troops to form on it, either to act defensively or make sorties; and to increase this accommodation enlarged portions, called *places of arms*, are made at certain spots.

Covinari. The soldiers who fought on the *covinus* were so called.

Covinus. A kind of war-chariot used by the ancient Britons and Belgians.

Cowardice. See APPENDIX, ARTICLES OF WAR, 42.

Cow-boys. A band of marauders in the time of the American Revolution, consisting mostly of refugees who adhered to the British side, and who infested the so-called "neutral ground" lying between the American and British lines, plundering all those who had taken the oath of allegiance to the Continental Congress. See SKINNERS.

Cowpens. A village in Spartanburg Co., N. C. At this place Gen. Morgan defeated Col. Tarleton, January 17, 1781; it is said that Tarleton lost 800 men in killed and wounded, and about 500 prisoners. The American loss was also considerable.

Cracow. A city in Austrian Poland, on the left bank of the Vistula. It was taken by Charles XII. in 1702; taken and retaken several times by the Russians and other confederates. The Russians were expelled from the city March 24, 1794; but it surrendered to the Prussians June 15, the same year, and in 1795 was awarded to Austria. It was occupied by 10,000 Russians, who followed the defeated Poles, September, 1831. It was finally incorporated with the Austrian empire, November 16, 1846.

Cradle. A narrow frame-work of heavy timbers upon which heavy guns are sometimes placed, to be moved upon rollers.

Crakers. Choice soldiers were so called in the time of Henry VIII.

Crakys. An old term for great guns.

Crampets. The cramp rings of a sword scabbard.

Crampton's Gap. A pass in the South Mountains, Frederick Co., Md. A stubborn fight of four or five hours took place here September 14, 1862, between part of Gen. McClellan's army under command of Gen. W. B. Franklin and a portion of the Confederate army under Gen. Cobb, which was defending the pass. The Confederates were forced to retire, having suffered severe loss in killed and wounded.

Cranon. In Thessaly, Northern Greece. The Macedonians under Antipater and Craterus defeated the confederated Greeks, twice by sea, and once by land, near Cranon.

Craonne. A town of France, in the department of Aisne. Here Victor and Ney defeated the Prussians under Blücher, after a severe contest, March 7, 1814.

Crater. The pit left by the explosion of a military mine.

Cravant. See CREVANT-SUR-YONNE.

Crécy, or Cressy. A village in France, department of the Somme, famous for a great victory obtained over the French, under Philip of Valois, by Edward III. of England, August 26, 1346. In this battle fell the king of Bohemia, the Count of Flanders, 8 other sovereign princes, 80 bannerets, 1200 knights, 1500 gentlemen, 4000 men-at-arms, with the Duke of Alençon and the flower of the French nobility. The English army was drawn up in three lines; of which the first was commanded by Edward, prince of Wales, assisted by the Earls of Warwick and Oxford; the second led by the Earls of Arundel and Northampton; while the third, or body reserve, was posted along the summit of a hill, under the command of the king in person, attended by the Lords Mowbray, Mortimer, and others. The English loss in this battle was very small.

Crécy-sur-Serre. A town of France, department of Aisne. Its castle was taken and razed by Louis le Gros in 1115. The English took the town in 1389, 1358, and 1378; it was taken by the forces of the League in 1589; and it was burned by the Spaniards in 1662.

Creedmoor. About 10 miles east of New York, noted for its splendid rifle range, which was established in 1871.

Creek Indians. Formerly a numerous and powerful tribe dwelling in Georgia and Alabama. Their number was much reduced by the war of 1814, in which year they waged war against the United States, but were subdued by Gen. Jackson. Of the survivors most removed beyond the Mississippi, and are now settled in Indian Territory, where they are rapidly advancing in the art of civilization. For numbers, etc., see INDIANS AND THEIR AGENCIES.

Creil. A town of France, department of the Oise. It was ravaged several times by the Normans; taken by the king of Navarre in 1358; by the English in 1434; by Charles VII. in 1441; pillaged by the Calvinists in 1567, and occupied by forces of the League in 1588.

Cremaille. In field fortification, is when the inside line of the parapet is broken in such a manner as to resemble the teeth of a saw. This advantage is gained by the measure, that a greater fire can be brought to bear upon the defile than if only a simple face was opposed to it; and consequently the passage is rendered more difficult.

Crémallière (Fr.). An inclined or zig-zag line of intrenchment.

Cremona. A fortified city of Northern Italy, the capital of the province of the same name. It was besieged by the Gauls in 200 B.C.; by Primus, a general of Vespasian, in 69; by Frederick Barbarossa in 1160. Prince Eugène took possession of it in 1702; it was taken by the French in 1796 and 1800.

Crenaux (Fr.). In fortification, small openings or loop-holes, made through the

walls of a fortified town or place. They are extremely narrow towards the enemy, and wide within; so that the balls from the besiegers can scarcely ever enter, whereas two or three soldiers may fire from within.

Crenelle, or Crenel. A term used sometimes to denote a battlement, but more frequently an embrasure in a battlement. The adjective crenellated is employed to signify that a building is supplied with crenelles.

Crépy. A town of France, department of the Oise; it was captured and sacked by the English in 1389; by the Duke of Lancaster in 1378; occupied by the Burgundians in 1418; by Pothon and Xaintrailles in 1419; it was besieged by the Duke of Burgundy in 1420; taken by the English and their allies in 1481; by Charles VII. in 1483; by the Duc de Mayenne in 1588.

Crépy en Laonnois. A town of France, department of Aisne. It was sacked by the English in 1389 and 1378, and taken by the Burgundians in 1418 and 1420. A treaty of peace was concluded here between Spain and France, September 18, 1544.

Crescent. The figure or likeness of the new moon borne in the Turkish flag or national standard; also the standard itself.

Crescent. The name of three orders of knighthood; the first instituted by Charles I., king of Naples and Sicily, in 1268; the second by René of Anjou, in 1448; and the third by the sultan Selim, in 1801. Of these the last is still in existence, and is remarkable for the fact that none but Christians are eligible. See CRESCENT, TURKISH ORDER OF.

Crescent. In heraldry, is used both as a bearing or charge, and as a difference or mark of cadency. In the latter case it designates the second son, and those that descend from him.

Crescent, Turkish Order of the. In 1799, after the battle of Aboukir, the sultan Selim III. testified his gratitude to Nelson by sending him a crescent richly adorned with diamonds. Selim was flattered by the value which the English admiral seemed to attach to this gift, and it was this circumstance which determined him, in 1801, to found the order of the Crescent, which is only conferred on Christians who have done service to the state. The second person on whom it was conferred was Gen. Sebastiani, for his defense of Constantinople against the English fleet in 1807.

Cressit. A small crease or dagger.

Crest. Signifies the line which marks the top of a parapet. It is sometimes called the interior crest. The exterior, or sub-crest, is the line marking the meeting of the exterior and superior slopes.

Crest. In feudal times was the distinctive ornament of the helmet; hence the term is frequently applied to the helmet itself. In heraldry the crest is shown as an appendage to the shield, placed over it, and usually borne upon a wreath. It is generally either some portion of the coat-armor, or a device commemorative of some incident in the his-

tory of a family, and often contains an allusion to the office of the bearer.

Crete. In fortification, implies the earth thrown out of the ditch in a fortification, trench, etc. The most elevated part of a parapet or glacis.

Crete. See CANDIA.

Crevant-sur-Yonne. In Northern France; besieged by John Stuart, earl of Buchan, with a French army, July, 1428, and relieved by the Earl of Salisbury with an army of English and Burgundians; after a severe contest the French were totally defeated.

Creveltdt. Near Cleves, Western Prussia. Here, on June 28, 1758, Prince Ferdinand of Brunswick defeated the French under the Count of Clermont.

Crimea. A peninsula of Southern Russia, formed by the Sea of Azof and the Black Sea. It was the *Taurica Chersonesus* of the ancient Greeks, by whom it was colonized about 550 B.C. Here was founded the kingdom of *Bosporus*, which formed part of the dominions of Mithridates, king of Pontus, whose descendants continued to rule the country under Roman protection until the irruption of the Goths, Huns, etc., 258 A.D. It fell into the hands of the Mongols in the 13th century, was subjected to the Ottoman yoke in 1475, and was ceded to Russia in 1783. War having been declared against Russia by England and France, March 28, 1854, an expedition against the Crimea was determined on. Accordingly, the allied British, French, and Turkish forces, amounting to 58,000 men, commanded by Lord Raglan and Marshal St. Arnaud, sailed from Varna September 8, and landed on the 14th, 15th, and 16th without opposition at Old Fort, near Eupatoria, about 80 miles from Sebastopol. On the 20th they attacked the Russians (40,000 to 50,000 strong), who were intrenched on the heights of Alma, supposed to be unassailable. After a sharp contest the Russians were totally routed. It was the scene of several other engagements during the continuance of the war, until the proclamation of peace in April, 1856. The allies quitted the Crimea July 12, following.

Crimes, Capital. See APPENDIX, ARTICLES OF WAR, 21, 22, 23, 39, 42, 43, 44, 45, 46, 47, 56, 57, 105, and Section 1843.

Crimes, Military. See APPENDIX, ARTICLES OF WAR.

Crimisus. A river in Sicily, near which Timoleon defeated the Carthaginians, 389 B.C.

Crimping-houses. Houses in which persons were entrapped into the army; hence the name of "crimp sergeant." In a riot in London some of these receptacles were destroyed by the populace, in consequence of a young man who had been enticed into one being killed in endeavoring to escape, September 16, 1794.

Criques (Fr.). Small ditches which are made in different parts of a ground for the purpose of inundating a country, in order to obstruct the approaches of an enemy.

Croatia. A province of the Austro-Hungarian monarchy. This region was anciently inhabited by the Pannonians, who were conquered by the Romans in the reign of Augustus. It was conquered by Coloman, king of Hungary, in 1102, and was with that country united to Austria in 1526.

Croats. In military history, light irregular troops were so called; generally people of Croatia. They were ordered upon all desperate services, and their method of fighting was the same as the Pandours.

Crochet. A hagbut or hand-cannon, anciently in use.

Cronstadt. A seaport and fortress of Russia, about 20 miles west from St. Petersburg. It was founded by Peter the Great in 1710, the island having been taken from the Swedes by him in 1708. A Swedish fleet was defeated here by the Russians in 1790, and in 1855 an English fleet, commanded by Sir Charles Napier, proceeded to the Baltic, with the view of taking this place or destroying its fortifications; but either from the inadequacy of the means placed at his disposal, or from the great strength of the forts, no attempt was made upon them.

Cropedy Bridge. Near Banbury, Oxfordshire, England. Here the royalists defeated Sir William Waller and the army of Parliament, June 29, 1644.

Cross-belts. Belts worn over both shoulders, and crossing the breast.

Cross-bow. A weapon formerly used in discharging arrows, formed by placing a bow crosswise on a stock.

Crossen. A town of the Prussian province of Brandenburg. In 1758 this place was taken by the Russians.

Cross-fire. The crossing of lines of fire from two or more points or places.

Cross, Victoria. See VICTORIA CROSS.

Crotchet. In fortification, an indentation in the glacis of the covered way at a point where a traverse is placed.

Crotchet. The arrangement of a body of troops, either forward or rearward, so as to form a line nearly perpendicular to the general line of battle.

Croton, or Crotona. One of the most celebrated of the Greek colonies in Southern Italy, founded about 710 B.C. About 510 a Crotoniat army of 100,000 men, under Milo, defeated a greatly superior force of Sybarites on the banks of the Tracis, took the city of Sybaris, and utterly destroyed it. (See SYBARIS.) In the second Punic war the Brutians, with the assistance of the Carthaginian general Hanno, succeeded in making themselves masters of the city of Crotona, with the exception of the citadel, which held out until induced to surrender on terms. The ravages of this war completed the decay of the city, and it sunk into the condition of an obscure provincial town.

Crown. The emblem of sovereignty in modern Europe. It was originally an Oriental decoration, and was adopted by Alex-

ander the Great from the kings of Persia. In modern states crowns were of various forms, till heralds devised a regular series of them to mark the various gradations of sovereignty, from that of the emperor down to what are called the coronets of counts and barons. In England, so entirely has the crown been regarded as the symbol of sovereignty, that the word is frequently used as synonymous with the monarchy.

Crown, Civic. See CIVIC CROWN.

Crown, Mural. See MURAL CROWN.

Crown, Obsidional. See OBSIDIONAL CROWN.

Crown, Triumphal. See TRIUMPHAL CROWN.

Crown, Vallary. See VALLARY CROWN.

Crowning. A term in fortifications generally applied to the operation, by the besieged, of establishing works on the crest of the glacis or summit of the breach. It is sometimes used when describing the movements of troops, to signify that they have reached the top of a hill or parapet, which they are said to have crowned.

Crown-work. A term used in fortification to signify a work consisting of two or more fronts of fortification, joined by two long branches to the ditch of another work, a river, a village, etc. It is generally used to defend a bridge or suburb.

Crows, or Absorokas. A tribe of Indians inhabiting the northern part of Wyoming Territory and the southern part of Montana. They are divided into two bands, and belong to the Dakota family. See INDIANS AND THEIR AGENCIES.

Crows-foot. An implement of metal with four points, so formed that, in whatever way it falls, there is one point upward; intended to injure the feet of horses; a caltrop.

Crucible, Steel. Steel melted in crucibles; cast steel. See ORDNANCE, METALS FOR.

Crusader. A knight engaged in the Crusades.

Crusades. From the Latin *cruz*, a "cross." A term applied to the military expeditions undertaken by Christian powers in the 11th, 12th, and 13th centuries for the recovery of Palestine, or the "Holy Land," from the Mohammedans. They were originated by Peter the Hermit, an enthusiastic French officer of Amiens, who turned pilgrim. There were in all eight crusades, from 1096 to 1270. The last one ended in the Christians being driven out of Syria.

Ctesiphon (afterwards *Al Madayn*). On the Tigris, the splendid capital of Parthia, was taken by Trajan in 116, and by Alexander Severus (who made 100,000 captives), 198. Its defenses deterred Julian from the siege, 363. Through the cowardice or treachery of the defenders, it was taken by Omar and the Saracens, 637, and utterly destroyed. He built Cufa near it with the remains.

Cuba. An island in the Caribbean Sea, at the mouth of the Gulf of Mexico. It is the

largest of the West Indian group, belongs to Spain, and is the most important of the Spanish colonial possessions. It was discovered by Columbus, October 28, 1492, and the Spaniards formed their first settlement on it in 1511, and have remained in possession ever since. Havana, a city of Cuba, was taken by the British in 1762, but was restored to Spain the following year. In May, 1850, and August, 1851, unsuccessful attempts to revolutionize the island were made by bands of adventurers under a Spaniard named Narcisso Lopez. In the latter expedition, the whole 450 who landed were either slain in fight or taken prisoners. In 1868 the inhabitants revolted against Spain, and declared a republic. Spain at once proceeded to crush them into submission, but the patriots held out until, in 1878, abandoning all hope of assistance or recognition from abroad, they were obliged to succumb, and the Spaniards resumed full control of the country.

Cubical Powder. See GUNPOWDER.

Cuddalore (India). On the coast of the Carnatic, was acquired by the English in 1681. It was reduced by the French in 1768, but recaptured in 1760 by Sir Eyre Coote. Again lost in 1781, it underwent a destructive siege by the British under Gen. Stuart, in 1783, which was continued until peace was signed, when it reverted to them, 1784.

Cuenca. A city of Spain, in New Castile, about 84 miles from Madrid. It was captured from the Moors by the kings of Castile and Aragon in 1176.

Cuirass (Fr. cuir, leather). Originally a jerkin, or garment of leather for soldiers, so thick and strong as to be pistol-proof, and even musket-proof. The name was afterwards applied to a portion of armor made of metal, consisting of a back-plate and breast-plate hooked or buckled together. The cuirass is worn in the British army by the Life Guards and the Horse Guards.

Cuissah. Defensive armor for the thighs, written also *cuisse*.

Cul-de-sac (Fr.). The "bottom of a bag." A passage with only one outlet; a position in which an army finds itself, with no way of exit but to the front.

Cullen Rifle. See MAGAZINE GUNS.

Cullen's-wood. In Ireland. A horrible slaughter of the English by the Irish took place at a village near Dublin on Easter or Black Monday, so called from this massacre, March 30, 1209. The English were a colony from Bristol inhabiting Dublin, whence they went to divert themselves at Cullen's-wood, when the O'Byrnes and O'Tooles fell upon them, and destroyed 500 men, besides women and children.

Culloden, or Drummossie Moor. A wide heath in Scotland, 8 miles east of Inverness, on which the Duke of Cumberland gained a decisive victory over the Highland army in their attempt to restore the Stuart dynasty to the throne, in 1746.

Culpeper Court-house. See FAIRFAX.

Culverin. A long cannon used from the 14th to the 16th century; generally carried a shot of 18 pounds. The gun at Dover Castle, called Queen Elizabeth's pocket-pistol, is a specimen of a large culverin. A *demi-culverin* was a similar piece, carrying a 9-pound shot.

Cumæ. An ancient and celebrated Greek city on the coast of Campania, about 6 miles north of Cape Misenum. The Tyrrhenians and Carthaginians attacked it by sea, and were defeated by Hieron, 474 B.C. In 420 the Samnites laid siege to the city, and after repeated attacks succeeded in carrying it by assault. It was given up to pillage and its inhabitants put to the sword. In the second Punic war Hannibal made an attempt upon the city, but was repulsed by Sempronius Gracchus. It was chosen by the Gothic kings as the depository of their regalia and valuables, and was the last place in Italy that held out against Narses.

Cumberland Gap. Is a natural gap in the Cumberland Mountains, about 80 miles in length, and about 150 miles south by east from Lexington, Ky. During the civil war it was an important strategic point, and was held at different times by each of the contending forces. It was held by the Confederates without any serious interference until Chattanooga was occupied by the forces of Gen. Mitchell, when it was evacuated about June 18, 1862, and occupied on the same day by the Union general Geo. W. Morgan. It was held by him until September 17, when he was compelled to evacuate it. It was again occupied by the Confederates, who to the number of 2000 under Gen. Frazer surrendered to Gen. Burnside, September 9, 1863. A large quantity of stores and 10 pieces of artillery were captured.

Cunaxa. In Mesopotamia, near the Euphrates, where Cyrus the Younger was defeated and slain by his brother Artaxerxes II., against whom he had conspired, 401 B.C.

Cunette, or Cuvette. A trench in the bottom of a dry ditch; an obstacle in the passage of an enemy (especially if filled with water), and also acting as a drain.

Cunnersdorf, or Kunnersdorf. A village in Bohemia, 12 miles north-northwest of Buntzlau. On August 12, 1759, Frederick the Great with 50,000 men attacked the Austrian and Russian army of 90,000 in their camp near this place, and at first gained considerable advantages; but pursuing them too far, the Austrians and Russians rallied, and gained a complete victory. The Prussians lost 200 pieces of cannon and 30,000 men in killed and wounded.

Curaçoa. An island in the Caribbean Sea, settled by the Spaniards about 1527, was seized by the Dutch in 1634. In 1800 the French settled on part of this island, quarreled with the Dutch, who surrendered it to a British frigate. It was restored to the Dutch in 1802; taken from them by the British in 1807, and again restored in 1814.

Curiel. A breastplate made of leather.

Current Series. In military administration, orders issued from established commands, such as divisions, departments, etc., being numbered in regular order for each year; this term is frequently used when referring to orders issued in the year passing or current, when the expression is employed.

Currier. A small musketoon with a swivel mounting.

Currytown. A village in Montgomery Co., N. Y., noted for the attack on and murder of its settlers by nearly 500 Indians and a few loyalists, commanded by a Tory named Doxstader, July 9, 1781. The settlers were unsuspecting of danger, and were generally at work in the fields when the enemy fell upon them. After killing and capturing all they could, the Indians set fire to the buildings, and drove away most of the cattle and horses in the neighborhood. Next day Col. Willett, who was at Fort Plain when the attack was made, pursued the enemy with about 150 men, attacked and killed about 40 of them, and recovered all their plunder.

Curtain. In fortification, is that part of the rampart or wall between two bastions or two gates.

Curtall, or Curtald. An ancient piece of ordnance, apparently a short one.

Curtatone. Near Mantua, Northern Italy. Here the Austrians under Radetzky crossed the Minco, and defeated the Italians after a severe conflict, May 29, 1848.

Customs of the Service. Sometimes called common law of the army. Signifies generally a right or law not written, but established by long usage. To render a custom valid it has been said that the following qualities are requisite: 1, habitual or long established practice; 2, continuance without interruption; 3, without dispute; 4, it must be reasonable; 5, certain; 6, compulsory; 7, customs must be consistent with each other. It may be said that the common law of the army derives its force from the tacit consent of those in the service. Gen. Kautz states that officers of the army have certain duties to perform that are governed by certain laws, rules, and regulations, which are interpreted and executed in a certain way, called "Customs of the Service." A knowledge of these rules of the service, and their application, constitutes the military profession, and is the true art of war. To this extent it is an exact science, and may be acquired by application and experience.

Custoza. Near Verona, Northern Italy.

Here the Italians were defeated by Marshal Radetzky, July 28, 1848; and here they were again defeated June 24, 1866, after a series of desperate attacks on the Austrian army. The Italians were commanded by their king, Victor Emmanuel, and the Austrians by the Archduke Albrecht.

Cut Off, To. To intercept, to hinder from union or return. In a military sense this phrase is variously applicable, and extremely familiar.

TO CUT OFF AN ENEMY'S RETREAT is to manoeuvre in such a manner as to prevent an opposing army or body of men from retreating, when closely pressed, either to their intrenchments or into a fortified town from which they had marched or sallied.

Cut up, To. To destroy promiscuously. When the cavalry are sent in pursuit of a flying enemy, the latter are generally cut up.

Cuttack (anc. Catac). A province in the East Indies, ceded to the East India Company in 1803. Cuttack, the capital, was taken by Col. Harcourt, October 14, 1803. This province was captured by the Mahratas in 1750.

Cusco. A city of Peru, capital of a department, and the ancient capital of the Peruvian empire, in South America. This city was entered by Pizarro in November, 1538, and taken by him in August, 1538, after a five months' siege.

Cylinder-gauge. See INSPECTION OF CANNON.

Cylinder-staff. See INSPECTION OF CANNON.

Cyprus. The most eastern island in the Mediterranean, near the mouth of the Gulf of Iskanderoon. It was divided among several petty kings till the time of Cyrus of Persia, who subdued them. It was taken by the Greeks in 477 B.C., and ranked among the proconsular provinces in the reign of Augustus. It was conquered by the Saracens, 648 A.D., but recovered by the Greeks in 957. It was reduced by Richard I. of England in 1191, and given by him to Guy de Lusignan, who became king in 1192, and whose descendants governed it until 1489, when it was sold to the Venetians. It was taken by the Turks in August, 1571, and held by them until June, 1878, when it was awarded to England by the "Peace Congress of Berlin."

Czaslau. A town of Bohemia, 45 miles east-southeast of Prague. Here Frederick the Great gained a victory over the Austrians, May 17, 1742.

D.

Dacia. The land of the Daci or Getæ. It comprised the various countries now known as Eastern Hungary, Transylvania, Wallachia, and Moldavia. The Getæ came originally from Thrace, and were divided into various tribes, and seem to have been the most valiant of the Thracian barbarians. Curio, the first Roman general who ever penetrated as far north as the Danube, did not venture to assail them. Julius Cæsar, however, is said to have intended their subjugation. In 10 B.C., Augustus sent an army up the valley of the Maros. From this time a continual war was waged by the Dacians against the Romans, who actually compelled the latter, in the reign of Domitian, to pay a tribute. In 101 A.D. the Emperor Trajan crossed the Theiss, and marched into Transylvania, where he fought a great battle near Thorda. The Daci, who were commanded by their famous chief Decebalus, were defeated. A second expedition of the emperor's (104 A.D.) resulted in the destruction of their capital, the death of Decebalus, and the loss of their freedom. In 270 and 275 A.D. the Romans abandoned the country to the Goths, and the colonists were transferred to Mœsia. After a series of vicissitudes, Dacia fell into the possession of the Magyars in the 9th century.

Dacota. See DAKOTA.

Dadur. A town of Beloochistan, 5 miles to the east of the Bolan Pass. It is said to be one of the hottest places in the world, and is celebrated as the place where, in November, 1840, the British troops routed a Kelat force.

Dag. A thick, clumsy pistol, used in the 15th and 16th centuries.

Dagen. A peculiar kind of poniard.

Dagger. A weapon resembling a sword, but considerably smaller, being used for stabbing at close quarters. Daggers are generally two-edged, and very sharp towards the point.

Daghestan. A province of Russia, on the west coast of the Caspian Sea. It was conquered by the czar Peter in 1723; restored to Persia, 1735; but re-annexed to Russia by Alexander I. in 1813.

Dague (*Fr.*). Dagger, a short thick poniard which was formerly used when individuals engaged in single combat.

Dahlgren Gun. So named from Admiral Dahlgren, its inventor. An improved form of ordnance used for howitzers, heavy artillery, and especially in naval gunnery. It having been demonstrated that in ordinary cast guns the weight of the metal forward is greater than is needed, and that by far the

greatest strain in firing is at the breech, Dahlgren greatly increased the relative size and weight of the breech, with the best results. These guns are chiefly used by the U. S. forces. See ORDNANCE, CONSTRUCTION OF.

Dahme. A town of Prussia, on the river of the same name. It is defended by a strong citadel, and inclosed by walls. Here, in 1713, the French were defeated by the Prussians.

Dahomey. An independent state of Guinea, Western Africa, extending along the coast from Fort Badagry on the east, to the river Volta, which separates it from Ashantee on the west. The Dahomans, who came into possession of this tract of country about the beginning of the 18th century, are for the most part tall, well formed, and intelligent, and, for an African race, singularly honest and far advanced in agriculture. With the exception of a few Mohammedans, whose religious belief is in no way interfered with, they are all pagans, and practice fetish-worship. The king is the most absolute of despots, having entire control over the lives and property of his subjects. Wholesale murder is one of the chief features in religious and state ceremonies, and the most valued ornaments of the royal residence are human skulls. As many as 2000 human victims are sometimes sacrificed at one "grand custom." Of the regular army of 12,000, about one-half are Amazons (devoted to calibacy), who are described as much more effective soldiers than their male companions in arms; but at the same time as blood-thirsty and ferocious as tigresses.

Dahra. In Algeria; on June 18, 1845, above 600 Kabyles at war with the French, were suffocated in a cave by smoke, the fire having been kindled by order of Gen. Pelissier, afterwards Duke of Malakoff. They had fired on a messenger bearing an offer of truce. The massacre was condemned by Soult, the minister of war, but justified by Marshal Bugeaud.

Dakota. A Territory in the north central part of the United States. It was organized under a territorial form of government March 2, 1861, but very extensive alterations have since been made in its boundaries. The Territory has been greatly disturbed by marauding bands of Sioux Indians, or Dakotas, who were in 1862 and 1863 especially daring and aggressive, and though they have frequently been defeated by U. S. troops, notably under Gens. Sully and Sibley in 1863, they are still very troublesome,

necessitating the frequent intervention of troops for the protection of the settlers.

Dakota Indians. A numerous and powerful tribe or collection of tribes of Indians of common stock, often called Sioux, who formerly roamed over the territory between the Missouri and Mississippi, but have moved farther west since 1851, and are settled on agencies in Dakota, Montana, Nebraska, etc. A great proportion of them still preserve their nomadic habits and are still frequently troublesome. See **INDIANS AND THEIR AGENCIES**.

Dalecarlians. Natives of Dalecarlia, Sweden, who revolted against Christian of Denmark, 1521, and placed Gustavus Vasa on the throne of Sweden.

Dalmatia. A narrow strip of territory extending along the Adriatic Sea; bounded north by Istria and Croatia, and east by Bosnia and Herzegovina. In ancient times Dalmatia was a considerable kingdom, and, after many unsuccessful attempts, was first subjugated by the Romans in the time of Augustus. After the fall of the Western empire, Dalmatia, which had formed the most southern part of the province of Illyricum, was captured by the Goths, from whom it was taken by the Avari (490), who in their turn yielded it to the Slavonians about 620. It continued under the rule of the Slavonians until the beginning of the 11th century, when King Ladislaus of Hungary incorporated a part of it with Croatia, while the other part, with the title of duchy, placed itself under the protection of the Venetian republic. The Turks afterwards made themselves masters of a small portion, and by the peace of Campo-Formio (1797), the Venetian part, with Venice itself, became subject to Austrian rule, and when Austria, in 1805, had ceded this part to Napoleon, it was annexed to the kingdom of Italy; afterwards (1810) to Illyria. Since 1814, excepting the Turkish portion, it has been reunited with Austria.

Damages, Barrack. In the British service, is the term applied to the injuries done to barracks, barrack furniture, etc., by soldiers, when the actual perpetrator cannot be discovered. The term is also applied to the sum levied from the company or regiment generally, to make good the injury. **Damages to arms, clothing, etc.** See **APPENDIX, ARTICLES OF WAR, 17**.

Damascus. A city of Syria, in Asiatic Turkey. During the time of the Hebrew monarchy, it was the capital of Syria, but afterwards passed successively under the rule of the Assyrians, Persians, Macedonians, Romans, and Saracens; and finally, in 1516, it was captured by the Turks (under Sultan Selim I.), in whose hands it has remained ever since. Damascus was at one time celebrated for the manufacture of sword-blades of the finest temper and most exquisite workmanship, but the process by which such unequalled specimens of art were perfected appears no longer to exist.

Damaskin. A certain kind of sabre; so called from the manufacture of Damascus.

Dame (Fr.). Among miners any portion of earth which may remain after the explosion of a mine has taken place. It likewise means a piece of wood with two handles used to press down turf or dirt in a mortar.

Damietta. A city of Lower Egypt, on the east branch of the Nile. It was taken by the Crusaders, 1219; lost, 1229; retaken by Louis IX., June 5, 1249; surrendered as his ransom when a prisoner, May 6, 1250.

Damnonii, Dumnonii, or Dumnunii. A powerful people who inhabited the southwest of Britain, comprising Cornwall, Devonshire, and the western part of Somersetshire, from whom was called the promontory Damnonium (now Cape Lizard), in Cornwall.

Danai. An ancient name of the Greeks, derived from Danaus, king of Argos, 1474 B.C.

Danala. A city in the territory of the Trocmi, in the northeast of Galatia, notable in the history of the Mithridatic war as the place where Lucullus resigned the command to Pompey.

Dancetté. One of the lines of partition in heraldry, differing from indented only in the greater size of the notches. See **INDENTED**.

Danes, or Northmen. Natives of Denmark; during their attacks upon Britain and Ireland they made a descent on France, where, in 895, under Rollo, they received presents under the walls of Paris. They returned and ravaged the French territories as far as Ostend in 896. They attacked Italy in 908. Neustria was granted by the king of France to Rollo and his Normans (Northmen), hence Normandy, in 911. The Danes invaded England, Scotland, and Ireland with varying successes from 788 to 1084.

Dangerous Space. That zone, partly before and partly beyond the object fired at (the sights having been correctly elevated), which is covered by the trajectory; the object may be displaced to the front or rear of its correct range-point, a distance equal, in the aggregate, to the depth of this zone, and still be struck by the projectile. "Dangerous space" is calculated under the assumption that the gun when fired is 56 inches from the ground, that it is aimed at a point 34 inches from the ground, and that the stature of a man is 68 inches; and that the head of a man on horseback is 8 feet above the ground. The "dangerous space" will, of course, be increased by the firer lying down and aiming at his adversary's feet. A part of the "dangerous space" is near the muzzle of the gun in the rising branch of the trajectory; the rest of it is in the falling branch; these two parts being continuous up to and including the "battle-range" (which see). The "dangerous space" varies with the weapon used and the object fired at; and for the same arm diminishes as the range increases beyond "battle-range"; up to this point it increases with the range. A perfect understanding of

this subject is essential to effective infantry fire upon the field of battle. Valuable tables will be found upon it in Laidley's "Rifle Firing."

Dannebrog. The ancient battle-standard of Denmark, bearing the figures of a cross and crown. It was fabled to have fallen from heaven at the battle of Volmar, in Esthonia (1219), during a crusade against the heathens. It was twice taken in battle and twice recaptured. In 1600 a mere fragment remained.

Dannebrog, Order of the. Is the second of the Danish orders of knighthood. It is said to have been founded in 1219, but fell into decay, and was restored in 1671.

Dannevirke, or Dannewerke. A series of earthworks considered almost impregnable, stretching across the long narrow peninsula of Sleswick, Holstein, and Jutland,—said to have been built during the "stone age." It was rebuilt in 987 by Thyra, queen of Gormo the Old, for which she was named *Dannabod*, "the pride of the Danes." It was again repaired between 995 and 1000. Near here the Prussians, aiding the duchies, defeated the Danes, April 23, 1848.

Dantzic, or Danzig. A city of Prussia; is surrounded with ramparts, mounted with cannon, and the town may be considered as being one of the strongest fortresses in Prussia. In the 10th century it was known as the capital of Pomerani; it passed with that province, in 1295, under the authority of Poland; but in 1308, Ladislaus IV. ceded the whole to the Teutonic knights, who held it till 1454. In that year it was again seized by the Poles; and in 1575, having refused to acknowledge Stephen Bathory, it had to sustain a siege by that monarch, and was taken in 1577. From 1860 to 1641 it was one of the principal towns in the Hanseatic League. When this league was dissolved, Dantzic joined Lubeck, Hamburg, and Bremen; and these four cities, down to a very late period, retained their name of Hanse Towns. In 1784 it was forced to surrender to the Russians and Saxons, who were then besieging Stanislaus of Poland. In 1793 it was occupied by the Prussians. It was taken by the French in May, 1807, after a long siege, by Marshal Lefevre, who thence acquired his title of duke of Dantzic. After Bonaparte's disastrous campaign in Russia, it was blockaded and obliged to surrender, after a long and able defense by Gen. Rapp. At the peace of Paris, in 1814, it reverted to Prussia.

Dardanelles, or Hellespont (anc. *Hellespontus*). A narrow strait between Europe and Asiatic Turkey, connecting the Sea of Marmora and the *Ægean* Sea. As it is the key to Constantinople, there are on both shores of this narrow channel numerous forts and batteries, there being 8 on the European and 7 on the Asiatic side. It was here the invading armies of Xerxes crossed on a bridge of boats to enter Europe. The passage of the strait was achieved by the

British under Sir John Duckworth, February 9, 1807; but he repassed with great loss, March 2, two castles occupying the sites of the ancient Sestos and Abydos, hurling down stones of many tons weight upon the British. The allied English and French passed the Dardanelles at the sultan's request, October, 1853.

Dart. A pointed, missile weapon, intended to be thrown by the hand; a short lance; a javelin; hence, any missile weapon.

Dartmouth. A seaport town of England, in Devonshire; it was burnt by the French in the reigns of Richard I. and Henry IV. In a third attempt (1404) the invaders were defeated by the inhabitants, assisted by the valor of the women. In the war of the Parliament, Dartmouth was taken, after a siege of four weeks, by Prince Maurice, who garrisoned the place for the king (1648); but it was retaken by Gen. Fairfax by storm in 1646.

Dauphin (*Dolphin*), *Fr.* An ornamental handle on brass guns over the trunnions, so called from its resemblance to that fish.

Dauphiné. An old province of Southeast France, successively held by the Allobroges, Burgundians, and Lombards; was, about 723-24, delivered from the invading Saracens by Charles Martel. Its counts were called dauphins; and when it was ceded to Philip of Valois, in 1349, the title of dauphin was given to the eldest son of the king of France, to whom it continued to be applied till the revolution of 1830.

David's Day, St. The 1st day of March is annually commemorated by the Welsh, in honor of St. David. Tradition states that on St. David's birthday, 540, a great victory was obtained by the Welsh over their Saxon invaders, and that the Welsh soldiers were distinguished by order of St. David by a leek in their caps.

Dax. A well-built town of France, department of Landes. It is surrounded by an old wall, flanked with towers, and is also protected by a castle. Dax was taken by the English in the 12th century, and remained in their possession till the middle of the 15th century.

Day-book. In the British service, is a sort of private memorandum-book, in which the pay-sergeant enters all details of expenditure other than pay under each man's head. These entries are made at the moment, and afterwards transferred to the ledger.

Day's March. See MARCH.

Dead Angle. In fortification, is any angle or piece of ground which cannot be seen, and which therefore cannot be defended from behind the parapet of the fortification.

Dead-head. In casting a cannon, is the surplus metal in the top of the mold; called also the *spree*.

Dead March. A piece of solemn music intended to be played as an accompaniment to a funeral procession.

Dead Pay. Was the pay formerly drawn

for soldiers really dead, whose names were kept on the rolls; and whose pay was appropriated by dishonest officers.

Dead-shot. An unerring marksman.

Debark. To leave a ship or boat and pass to the land; to go on shore; as, the troops debarked at 4 o'clock; disembark.

Deblai. The hollow space or excavation formed by removing earth for the construction of parapets in fortification. Thus the ditch or fosse whence the earth has been taken represents the *deblai*, while the earth itself, so removed, constitutes the *remblai*.

Deblayer un Camp (Fr.). To evacuate a camp for the purpose of cleaning and purifying the ground.

Debouch. A military term, signifying to march out from a wood, defile, or other confined place into open ground; also an outlet or available issue by which an army can march out.

Débris (Fr.). Remains, ruins of a building or town which has been sacked; broken remains of an army after defeat.

Debruised. A term in English heraldry used to indicate the restrained position of an animal in a coat of arms, by having any of the ordinaries laid over it.

Decagon. In fortification, is a polygon figure, having 10 sides, and as many angles; and if all the sides and angles be equal, it is called a regular decagon, and may be inscribed in a circle. The sides of a regular decagon are in power and length equal to the greatest segment of a hexagon, inscribed in the same circle and cut in extreme and mean proportion.

Decamp, To. To march an army or body of men from the ground where it before lay encamped. It also signifies to quit any place or position in an unexpected manner.

Decanus. In Roman military history, a petty officer who presided over the 10 soldiers of his contubernium, or those living in the same ten.

Deccan. An extensive region of India; invaded by the Mohammedans in 1294. About 1686-90, Aurungzebe I. recovered the Deccan, but soon lost great part of it to the Mahrattas. A large part of the Deccan was ceded to the English in 1818.

Deceased Officers and Soldiers. See APPENDIX, ARTICLES OF WAR, 125, 126.

Dechargeurs (Fr.). Are men appointed to attend the park of artillery, and to assist the non-commissioned officers, etc., who are employed on that service. It is the duty of the former to keep a specific account of articles received and consumed, in order to enable the latter to furnish their officers with accurate statements.

Decimation. A military punishment inflicted among the Romans on cowardly or mutinous troops. It consisted in selecting by lot one-tenth of the whole body of troops who misbehaved, and putting them to death. There have been a few instances of this species of punishment in modern times. In

1642 the Archduke Leopold employed it against a regiment of cavalry; Marshal Créqui also had recourse to it against the mutinous garrison of Trèves, and before the battle of Waterloo Blücher is said to have punished in this manner a body of mutinous troops.

Decisions. In courts-martial, the majority of votes decides all questions as to the admission or rejection of evidence, and on other points involving law or custom. If equally divided, the doubt is in favor of the prisoner.

Declaration of Independence. This celebrated document by which the thirteen United Colonies of America announced their intention of taking their affairs into their own hands, renouncing their allegiance to Great Britain, and asserting their freedom, was drawn up by Thomas Jefferson, and received the unanimous approval of the delegates in the Congress of the Colonies, July 4, 1776.

Declaration of War. The formal announcement by a government of its intention to wage war against another, is a proceeding which is observed among all civilized nations. In the United States the declaration of war is a power exercised by Congress alone. During the age of chivalry, a herald made declaration of war at the enemy's court, his tabard on his arm.

Decompte (Fr.). Signifies a liquidation or balance, which from time to time was made in the old French service, between the captain of a company and each private soldier for money advanced or in hand.

Decoration Day. The anniversary, in the United States, on which flowers are placed on soldiers' graves, and which is observed on May 30. This day was set apart for the purpose mentioned soon after the war of the Rebellion, 1861-65.

Decoration, Military. A medal, cross of honor, etc., bestowed for distinguished services.

Decorations. In pyrotechny, are the compositions which are placed in the heads of rockets, in paper shells, etc., to make a brilliant display when the receptacle is burst.

Decouplé. In heraldry, signifies severed or disjoined, so that the ends stand at a distance from one another, as a *chevron decouplé*.

Decoy. To lead or to entice into a snare; to lead into danger by artifice; to entrap. An enemy is said to be decoyed when a small body of troops draws them in to action, whilst the main body lies in ambush ready to act with the greatest effect.

Decrement. Is a heraldic term by which the wane of the moon is indicated. *Decrescent* and *decours* are also used in the same sense. A moon *decrecent* is a half-moon with her horns turned to the sinister.

Decurion. An officer in the Roman cavalry, who commanded a decuria, which was a body consisting of 10 men.

Deeg. A strong fortress of Hindostan,

in the province of Agra, which was captured by the British arms under Gen. Lake in 1804.

Deep. A term used in the disposition or arrangements of soldiers placed in ranks before each other; hence, two deep, three deep, etc. *Deep line of operations*, a long line.

Default. A military offense, in the British service, is so called.

Defaulter. A soldier who has been guilty of a military offense. It is generally applied to men sentenced to confinement to barracks, and attaches to them until the completion of their punishment.

Defaulter Book. The book in which the defaulter sheets are contained. The regimental defaulter book containing regimental, and the company defaulter book company, defaults.

Defaulters' Sheet. For every soldier there are two sheets of foolscap paper, in one of which, called his company defaulter sheet, are entered all offenses and the punishments awarded. The other, called the regimental defaulter sheet, contains only offenses for which a man has been punished by more than seven days confined to barracks, or other awards considered of equal gravity.

Defeat. This word expresses the complete want of success of an army; a repulse signifying less, and a rout more, than defeat.

Defeat. To resist with success; as, to defeat an assault.

Defection. The act of abandoning a person or cause to which one is bound by allegiance or duty, or to which one has attached himself.

Defend. To secure against attack; to maintain; as, to defend a town; to defend a cause.

Defender. One who defends; one who maintains, supports, protects, etc.

Defense. In military law, is the defendant's answer to the plea; an opposing or denial of the truth or validity of the plaintiff's case; the method of proceeding adopted by the defendant to protect himself against the plaintiff's action.

Defense. In fortification, consists of all sorts of works that cover and defend the opposite posts; as flanks, parapets, casements, etc.

Defense, Active. Comprehends every species of offensive operation which is resorted to by the besieged to annoy the besiegers.

Defense, Distant. Consists in being able to interrupt the enemy's movements by circuitous inundations; to inundate, for instance, a bridge, when a convoy is passing, or to insulate batteries, the heads of saps or lodgments which have been made in the covert way. By this species of defense an enemy's communications may be perpetually intercepted, and his approaches so obstructed as to force him to leave dangerous intervals.

Defense, Line of. Represents the flight of a rifle-ball from the place where the soldiers stand, to scour the face of the bastion. The line of defense should never exceed the range of a rifle. It is either *fichant* or *rayant*. The first is when it is drawn from the angle; the last, when it is drawn from a point in the curtain, ranging the face of the bastion in fortification.

Defense, Lines of. Are the distances between the salient angle of the bastion and the opposite flank; that is, the faces produced to the flanks.

Defense, Passing. Is chiefly confined to inundations, and is effected by letting out water in such a manner that the level ground which lies round a fortified town or place may be entirely overflowed, and become an inert stagnant pool.

Defensive. A force is said to be on the defensive, or to assume a defensive attitude, when it takes up a position to receive an attack.

Defensive War. See WAR, DEFENSIVE.

Deflading, or Defilement. The art of arranging the plan and profile of works, so that their lines shall not be liable to enfilade, nor their interior to plunging or reverse fire.

Defile. A narrow passage, or road, through which troops cannot march otherwise than by making a small front and filing off.

Defile, To. To reduce a body of troops into a small front, in order to march through a defile; also, to deflade.

Deformer (Fr.). In a military sense, signifies to break; as, *deformer une colonne*, to break a column.

Dégat (Fr.). The laying waste an enemy's country, particularly in the neighborhood of a town which an army attempts to reduce by famine, or which refuses to pay military exactions.

Degorgeoir (Fr.). A sort of steel pricker used in examining the vent of a cannon; a priming wire.

Degradation. In military life, the act of depriving an officer forever of his commission, rank, dignity, or degree of honor, and taking away at the same time every title, badge, or privilege he may possess.

Degraded. In heraldry, means placed upon steps or degrees.

Degsestan, Battle of. See SCOTLAND.

Dehors. In the military art, all sorts of outworks in general, placed at some distance from the walls of a fortification, the better to secure the main places, and to protect the siege, etc.

Delaware. One of the Middle States of the United States, and one of the original thirteen. It derives its name (as do the Delaware River and Bay and Delaware Indians) from Thomas West, lord de la Warr, who visited the bay in 1610, and died on his vessel at its mouth. It was first settled by the Swedes and Dutch, but came into possession of the English in 1664, and formed

part of the grant to William Penn in 1682. In 1701 it was separated from Pennsylvania, though subject to the same governor down to the period of the Revolution, to the success of which it contributed its full share, and for the maintenance of the results of which it has ever been a zealous advocate.

Delaware Indians. A tribe of aborigines, called by themselves *Lenni-Lenape*, who formerly lived on the Delaware River, but are now settled in Indian Territory, on the Wichita Agency, with the Caddos. See **INDIANS AND THEIR AGENCIES**.

Delf. A heraldic charge representing a square sod or turf, the term being probably derived from the word *delve*, to dig. A *delf tenné* is the appropriate abatement for him who revokes his challenge, or otherwise goes from his word.

Delhi. A celebrated city of Northern India, situated on an offset of the river Jumna. The city was taken by a British army under Lord Lake, September 8, 1803, and has ever since continued under British rule. In 1857 it was held by the Sepoys, who murdered several English subjects, but was retaken, after a successful assault, September, 1857.

Deliver Battle. A term taken from the French *livrer bataille*, meaning to enter practically upon a contest; the opposing armies being in sight of each other.

Dellamcotta. A fortress of Northern Hindostan, in the province of Bootan, commanding the principal pass into that province. It was stormed by the British troops in 1773, which so alarmed the Booteans that they petitioned for peace. The fortress was then restored to them.

Déllis. Were Bosnian and Albanian horsemen, who served without pay in the Turkish armies.

Delphi (now Castri). An ancient town of Phocis, Greece, celebrated on account of its oracle of Apollo. Its temple was burnt by the Pisistratidæ, 548 B.C. A new temple was raised by the Alcmaeonidæ. The Persians (480 B.C.) and the Gauls (279 B.C.) were deterred from plundering the temple by awful portents. It was, however, robbed and seized by the Phocians, 357 B.C., which led to the Sacred War, and Nero carried from it 300 costly statues in 67 A.D.

Demembré, or Dismembered. A heraldic term signifying that the members of an animal are cut from its body.

Demerara and Essequibo. Colonies in Guiana, South America, founded by the Dutch in 1680, were taken by the British, under Maj.-Gen. Whyte, April 22, 1796, but were restored at the peace of Amiens, 1802. They again surrendered to the British under Gen. Grinfield and Commodore Hood, September, 1803, and became English colonies in 1814.

Demi, or Demy. In heraldry, an animal is said to be demi when only the upper or fore half of it is represented.

Demi-bastion. A piece in fortification,

which generally terminates the branches of crown-works or horn-works towards their head.

Demi-brigade. A half brigade.

Demi-cannon. A kind of ordnance, anciently used, carrying a ball of from 30 to 36 pounds in weight.

Demi-culverin. A kind of ordnance anciently used, carrying a ball of 9 or 10 pounds in weight.

Demi-distances (Fr.). Half distances; as, *serrez la colonne à demi-distances*, close to the column at half distances.

Demi-file (Fr.). Is that rank in a French battalion which immediately succeeds to the *serre-demi-file*, and is at the head of the remaining half of its depth.

Demi-gorge. In fortification, is half the gorge or entrance into the bastion, not taken directly from angle to angle, where the bastion joins the curtain, but from the angle of the flank to the centre of the bastion, or the angle which the two curtains would make by their prolongation.

Demi-hag. A long pistol, much used in the 16th century.

Demi-lance. A light lance; half-pike. Also a light horseman who carried a lance.

Demi-lune. In fortification, is a work constructed beyond the main ditch of a fortress, and in front of the curtain between two bastions, intended to defend the curtain; a ravelin.

Demi-parallel. In fortification, is a place of arms formed between the second and third parallels to protect the head of the sap.

Demi-pike. A kind of spontoon, 7 feet long, used by infantry or for boarding.

Demi-place d'Armes. In fortification, a circular trench constructed upon the prolongation of the lines of the covered way, to the right and left of the zigzags, to cover the troops employed in their defense.

Demi-revetment. A revetment of the scarf only to the height protected by the glacis.

Demmin. A town of Prussia, on the river Peene, on the borders of Pomerania and Mecklenburg. It is a town of considerable antiquity, having been a place of importance in the time of Charlemagne, and is noted for the number of sieges it has sustained. Its fortifications were destroyed in 1759. In 1807 several engagements took place here between the French and Russians.

Demonstration. In military operations, is an apparent movement, the chief object of which is to deceive the enemy, and induce him to divide his force, as if to meet dangers from various quarters. When thus divided and weakened, he may be attacked with greater chance of success.

Denain. A village of France, department of the North. It is celebrated in history as the scene of the decisive victory gained in 1712 by Marshal Villars over the allies commanded by Prince Eugène.

Denbigh. The capital town of the county of the same name, North Wales. In ancient

times it was a place of great military importance. The castle was gallantly held by Col. William Salisbury for the king during the civil wars of the revolution, but finally surrendered to the Parliamentary forces under Gen. Mytton.

Dendermonde. A town of Belgium, in the province of East Flanders. It is fortified, and has a citadel dating from 1584, and possessing the means of laying the surrounding country under water in case of an attack. Louis XIV. besieged it in vain in 1667, but Marlborough, aided by a long drought, succeeded in taking it in 1706.

Denmark. A kingdom of Northern Europe, which, with Sweden and Norway, was originally called Scandinavia. In ancient times it was occupied by a fierce and warlike people, whose principal occupation was piracy. In 882 the Danes landed in England, and there established two kingdoms, and two centuries afterwards the conquest of England was completed by Canute, king of Denmark. In the 15th century Christian I. connected Norway, Sleswick, and Holstein with the crown of Denmark, but in consequence of siding with Napoleon, Denmark was obliged to cede Norway to Sweden in 1814. In 1848 Sleswick and Holstein revolted, the duchies being aided by Prussia and other powers of the Germanic Confederation, who, however, concluded a peace on their own account, July 2, 1850. The duchies continued the war, were defeated at Idsted, July 25, 1850, and peace was restored by the intervention of the powers in January, 1851. Hostilities again commenced in 1863, and were terminated by the peace of Vienna in 1864, Denmark renouncing all claim on Sleswick-Holstein.

Dennewitz. A small village in the province of Brandenburg, Prussia. Here was fought, on the 6th of September, 1812, a battle between 70,000 French, Saxons, and Poles, commanded by Marshal Ney, and 45,000 Prussians, under Gen. Tauentzien. Both armies more than once drove each other from their positions, but the Prussians finally prevailed, and Ney gave orders to retreat. At this moment Bernadotte, crown-prince of Sweden, appeared at the head of a large army, and turned the retreat of the French army into a complete rout.

Denonciateur (Fr.). In a general sense, may not improperly be called a military informer. So rigid indeed were the regulations (even in the most corrupt state of the French government) against every species of misapplication and embezzlement, that if a private dragoon gave information to the commissary of musters of a troop horse that had passed muster, having been used in the private service of an officer, he was not only entitled to his discharge, but received, moreover, 100 livres in cash, and became master of the horse and equipage, with which he retired unmolested. The officer was summarily dealt with.

Densimeter. An apparatus for obtaining

the specific gravity of gunpowder by immersing it in mercury. It consists of an open vessel containing mercury, a frame supporting a glass globe communicating by a tube with the mercury in the open vessel, and joined at top to a graduated glass tube, which communicates by a flexible tube with an ordinary air-pump. Stop-cocks are inserted in the tubes above and below the glass globe, and a diaphragm of chamois-skin is placed over the bottom orifice and one of wire cloth over the top orifice of the globe. The arrangement allows the globe to be filled with mercury to any mark on the graduated tube, or with gunpowder and mercury. The globe can be taken off and weighed in both cases. The specific gravity is obtained from the relation between the weights in the two cases.

Density. The density or specific gravity of gunpowder is one of its most important properties. In the form of dust, the velocity of combustion increases rapidly with the density up to about 1.80, when it decreases. In grained powder the velocity of combustion decreases as the density increases. For English or American powder this velocity is about four-tenths of an inch per second. For French and most of the continental powders, which are less dense than the English, it is about forty-eight-hundredths of an inch. The excellent preservative qualities of English and American powders are largely due to their high densities,—the standard being about 1.75. A certain degree of density is absolutely essential to grain powder to prevent the inflamed gases from penetrating the pores of the powder and flashing off the whole mass to the destruction of the gun. In the manufacture of powder the density depends, first, upon the amount of trituration to which the ingredients are subjected in the incorporating mill; second, upon the pressure employed to form the cake; and, third, upon the degree of moisture it contains when subjected to these operations, particularly the last. The pressure-gauge is not a reliable measure of the *density* given to a powder, though a good indication of the *hardness*, with which density must not be confounded. Dry powder meal offers a great resistance to compression, but becomes very hard,—the work being consumed in consolidating the surface particles. To obtain uniform density a certain amount of moisture is necessary to assist the particles in their movement. As much as 6 per cent. of moisture is used in making prismatic powder.

Department Commander. See GEOGRAPHICAL DEPARTMENT, COMMANDER OF.

Department, Military. A military subdivision of a country. The whole territory of the United States is divided into military departments, each under a general officer. See GEOGRAPHICAL DEPARTMENT, COMMANDER OF.

Department of War. That department of a government which takes charge of all matters relating to war. See SECRETARY OF WAR.

Depenses (Fr.). In a military sense, implies secret service money.

Deploy. Signifies a military movement, in which a body of troops is spread out in such a way that they shall display a wider front and a smaller depth than before deploying. To *ploy* is to execute the reverse of this movement.

Deployment. The act of unfolding or expanding any given body of men, in order to extend their front.

Deposits, Soldiers'. Soldiers in the U. S. service may deposit with the paymaster any portion of their savings, in sums not less than \$5, the same to remain so deposited until final payment on discharge. Interest on deposits at the rate of 4 per cent. per annum will be paid on final settlement upon each deposit from the date thereof to date of discharge. No interest is payable, however, upon any deposit of less than \$50, or upon any sum, whatever its amount, which has been on deposit for a less period than six months prior to date of discharge. Deposits are forfeited by desertion.

Depot. Any place at which military stores are deposited for the use of an army. It also signifies a fort or other suitable place appropriated for the reception of recruits, or detached parties belonging to different regiments. In fortification, the term is likewise used to denote a particular place at the trail of the trenches out of the reach of the cannon of a besieged place. It is here that besiegers generally assemble when ordered to attack the outworks, or support the troops in the trenches when there is reason to imagine the besieged intend making a sally.

Depredate. To take plunder or prey; to commit waste; as, the troops depredated on the country; also, in an active sense, to plunder or pillage; to spoil; to lay waste.

Depressed Gun. Any piece of ordnance having its mouth depressed below the horizontal line.

Depression. The pointing of any piece of ordnance so that its shot may be projected short of the point-blank.

Depth. A technical word, peculiarly applicable to bodies of men drawn up in line or column. The depth of a battalion or squadron is the number of men in rank and file from front to rear.

Deputy-Marshal. In the British service, is the senior sergeant-major of each regiment of Foot Guards, who sees after and makes out the routes of deserters, and receives an allowance for so doing.

Deraser (Fr.). To cut off the superfluous clay from a gun-mold previous to its being placed in the pit.

Derayah, El. A town of Arabia, nearly in the centre of the district called El Nedjed. It is tolerably well fortified, but after a siege of seven months, in 1819, it was nearly destroyed by the troops of Ibrahim Pasha.

Derbend, or Derbent. A town of Russia, the capital of the province of Daghestan. It is surrounded by strong walls and flanked

and strengthened by massive bastions. It was taken from Persia by Russia in 1722, restored to the former power in 1735, and retaken by the Muscovites in 1795.

Derivation (Fr.). Drift of rifle projectiles. See PROJECTILES.

Descend. In a military sense, means to make an attack or incursion as if from a vantage-ground.

Descents. In fortification, are the holes, vaults, and hollow places made by undermining the ground.

Descents into the Ditch. Cuts and excavations made by means of saps in the counterscarp, beneath the covert way. They are covered with thick boards and hurdles; and a certain quantity of earth is thrown upon the top in order to obviate the bad effects which might arise from shells, etc.

Descriptive Book. A book in which descriptive lists of the soldiers belonging to a company are kept.

Descriptive List of Soldier. A paper giving a short history of the soldier, a description of his person, and the statement of his account. It accompanies him wherever he goes, being intrusted to his detachment or company commander.

Descriptive Memoir. This memoir, which should always accompany a sketch of a topographical reconnoissance, is intended to convey that information relating to the natural features of the ground not expressed upon the sketch; to express that information for which there are no conventional signs, and to present those facts relative to the ground which become important by being considered in connection with the probable military operations to be undertaken.

Desenzano. A town of Lombardy, in the province of Brescia. Garibaldi, in command of the Italian volunteers, defeated an Austrian force near this place in 1859.

Desert. To quit a service without permission; to run away; as, to desert from the army; to forsake in violation of duty; as, to desert one's colors.

Deserter. A soldier who absconds, during the period for which he is enlisted, from the service of the army or navy. In England this crime was by certain old statutes made punishable with death, but now the punishment is left to the discretion of a court-martial. In the United States, deserters in the time of war may be sentenced to death, but in time of peace the penalty for this offense is lighter.

Desertion. The act of absence from duty without intention to return. See APPENDIX, ARTICLES OF WAR, 47.

Despatch, or Dispatch. An official military letter sent by the commander of an army in the field to the authorities at home. The term is also applied to the military letters giving an account of military operations sent by subordinate officers holding detached commands to the general of an army in the field. See DISPATCHES.

Detach. To separate for a special object

or use; as, to send out a body of men on some particular service, separate from that of the main body.

Detached Bastion. In fortification, is that basis which is separated from the enceinte by a ditch.

Detached Works. In fortification, are such outworks as are detached, or at a distance from the body of the place; such as half-moons, ravelins, bastions, etc.

Detachment. In military affairs, an uncertain number of men drawn out from several regiments or camps equally, to march or be employed as the general may think proper, whether on an attack, at a siege, or in parties to scour the country. A detachment of 2000 or 3000 men is a command for a general officer, 800 for a colonel, 500 for lieutenant-colonel, 200 or 300 for a major, 80 or 100 for a captain, 40 for a lieutenant, 12 for a sergeant, and 6 for a corporal.

Detachment, Gun. The men required for the service of a piece of artillery.

Detachment, Manœuvring. The men required for mechanical manœuvres of a siege or sea-coast gun.

Detail for Duty. Is a roster, or table, for the regular performance of duty either in camp or garrison. The general detail is regulated by the adjutant-general, according to the strength of the several corps. The adjutant of each regiment superintends the detail of officers and non-commissioned officers for duty, and orderly sergeants detail the privates.

Detmold. A town of Northwestern Germany, capital of the principality of Lippe-Detmold, on the Werra. In the vicinity is the battle-field on which the army of Varus was destroyed by the Germans under Arminius, in 9 A.D.

Detonating Powder. A term applied in chemistry to fulminating mercury and silver, and to other compounds which suddenly explode when struck or heated. Some of these compounds have been much used for the ignition of gunpowder in percussion locks.

Detonation. The instantaneous conversion of an explosive into gas; a term applied to the phenomena attending the explosion of certain substances, such as *nitro-glycerine*, *chloride of nitrogen*, *iodide of nitrogen*, *gun-cotton*, the *picrates*, etc. Detonation, or explosion of the first order, is distinguished from ordinary explosion, or explosion of the second order, by the different way in which the explosion is propagated. Ordinary explosion proceeds by inflammation, being nothing more than a rapid combustion. Detonation is propagated by vibration. A detonating agent is a substance used to produce the *initial vibration*, or "impulse of explosion." The exploder, or cap, used for this purpose is usually primed with fulminate of mercury, a substance having a wide range in bringing about detonation in the high explosives.

Dettingen. A village of Bavaria, on the Maine. It is noted for a victory gained by the English, under George II., over the French, commanded by Marshal Noailles, in 1748.

Devastation. In warfare, is the act of destroying, laying waste, demolishing, or unpeopling towns, etc.

Deviation of Projectiles. See **PROJECTILES**.

Device. The emblem on a shield or standard.

Devicotta. A fort and seaport town in the south of India, and district of Tanjore. It was taken in 1749 from the rajah of Tanjore.

Devonshire. A maritime county in the southwest peninsula of England, between the Bristol and English Channels. The Saxons failed to conquer Devonshire till the 9th century. It was ravaged by the Danes in the 9th and 10th centuries, and by the Irish in the 11th century. In 1688 the Prince of Orange landed at Tor Bay, in this county.

Deyrah, or Dehra. A town of Northern Hindostan, and the principal place of the British province designated the Deyrah Doon. During the Nepal war in 1815, the Deyrah Doon became the scene of military operations, and acquired a mournful celebrity by the obstinate defense made by the Goorkhas at Kalunga, or Nalapani, in the siege of which the British lost a considerable number of men, including their gallant commander, Gen. Gillespie.

Diable (*Devil-carriage*), *Fr.* A truck-carriage on four trucks, for carrying mortars, etc., to short distances; it is provided with draught-hooks at each end, so as to be drawn to front or rear.

Diameter. In both a military and geometrical sense, implies a right line passing through the centre of a circle, and terminated at each end by the circumference thereof.

Diaphragm Shell. An obsolete spherical shell formerly used in the English service, so named from the arrangement of the interior.

Diapré. A term applied in heraldry to fields and charges relieved by arabesque and geometrical patterns. This ornamentation, not affecting the heraldic value of the objects to which it was applied, was generally left to the fancy of the painter.

Diarbekir. A city of Asiatic Turkey, and capital of the pashalic of Diarbekir. This place was successively taken, retaken, and destroyed, in the ancient wars between the Persians and Romans. It was pillaged by Tamerlane in the year 1398; and was successively taken and retaken by the Persian kings, until it was conquered by Selim, the first sultan of the Osmanli Turks, in the year 1516. In 1605 it again fell into the power of Persia; but it was afterwards retaken by the Turks, under whose dominion it has since continued.

Dictator. In the earliest times, was the

name of the highest magistrate of the Latin Confederation, and in some of the Latin towns the title was continued long after these towns were subjected to the dominion of Rome. In the Roman republic the dictator was an extraordinary magistrate, irresponsible and endowed with absolute authority. The dictatorship could not lawfully be held longer than six months. Dictators were only appointed so long as the Romans had to carry on wars in and out of Italy, or when any vigorous measure had to be acted upon. The limits of his power were as follows: he could not touch the treasury; he could not leave Italy; and he could not ride through Rome on horseback without previously obtaining the permission of the people.

Dideon's Formulas. Certain equations relating to the trajectory of a projectile in the air, obtained by Capt. Dideon of Metz by integrating the differential equations of the trajectory under certain assumptions as to the law of the resistance, etc. See **PROJECTILES, TRAJECTORY, IN AIR.**

Diego. A very strong and heavy sword.

Diest. A town of Belgium, in Southern Brabant, on the Demer. This town was taken by the Duke of Marlborough in 1705, but retaken by the French, and dismantled, in the same year. Since 1830 it has been surrounded with fortifications and made a place of great strength.

Dietary, Military. See **SUBSISTENCE OF ARMIES AND FOOD.**

Dieu et Mon Droit (Fr.). "God and my Right." The motto of the royal arms of England, first assumed by Richard I., to intimate that he did not hold his empire in vassalage of any mortal. It was afterwards assumed by Edward III., and was continued without interruption to the time of William, who used the motto *Je maintiendray*, though the former was still retained upon the great seal. After him Anne used the motto *Semper eadem*; but ever since her time *Dieu et mon droit* has continued to be the royal motto.

Differences. In heraldry, are marks introduced into a coat of arms to distinguish brothers and their descendants from the father or head of the house, while he is alive; marks of cadency being used for a similar purpose after his death.

Differential Pulley. A hoisting apparatus consisting of an endless chain and two pulleys of slightly different diameters. The chain winds upon one while unwinding from the other. It is attached to a crane, and used to hoist heavy shot to the muzzle of large cannon.

Dijon. An ancient walled city of France, chief town of the department of Côte-d'Or. It has been several times captured in war. It was attacked by the Germans under Gen. Beyer, October 30, 1870. The heights and suburbs were taken by Prince William of Baden, and the town surrendered October 31.

Dike, or Dyke. A channel to receive

water; also a dam or mound, to prevent inundation. Dikes differ from sluices; the former being intended only to oppose the flowing of other water into a river, or to confine the stream by means of strong walls, pieces of timber, or a double row of hurdles, the intervals of which are filled with earth, stones, or pebbles.

Dimachæ. In ancient military affairs, were a kind of horsemen, answering to the dragoons of the moderns.

Dimidiation. In heraldry, a mode of marshaling arms, adopted chiefly before quartering and impaling according to the modern practice came into use, and subsequently retained to some extent in continental, though not in English heraldry. It consists in cutting two coats of arms in halves by a vertical line, and uniting the dexter half of one to the sinister half of the other. Coats of husband and wife were often so marshaled in England in the 13th and 14th centuries.

Diminish. In a military sense, means to decrease the front of a battalion; to adopt the columns of march, or manoeuvre according to the obstructions and difficulties which it meets in advancing.

Diminished Angle. Is that formed by the exterior side and line of defense in fortification.

Diminutions. A word sometimes used in heraldry for differences, marks of cadency, and brisures, indifferently.

Dinan. A town of France, in the department of Côtes-du-Nord, situated on the Rance. This place was often besieged during the Middle Ages; in 1373 was taken by Du Guesclin, and in 1379 by De Clisson.

Dinant. A town of Belgium, on the Meuse, 14 miles south from Namur. It was taken by Philip the Good, duke of Burgundy, in 1466, when 800 of its inhabitants were taken by twos, tied back to back, and thrown into the Meuse. The town was also razed to the ground; but in 1493 it was rebuilt. In 1564 and 1675 it was again taken by the French.

Dinapore, or Dinapoor. A town of British India, in the presidency of Bengal, on the Ganges. It is an important military station, containing extensive barracks and cantonments for English and native troops.

Dindigul. Capital of a district in the south of India, in the presidency of Madras. It was captured by the British troops, under Col. Stuart, in 1790.

Dipping of the Muzzle. A piece of artillery when fired has been explained by the action of the vent in bringing increased pressure on the elevating screw or quoin, the reaction from which throws down the muzzle.

Direct Fire. See **FIRE, DIRECT.**

Directing Sergeant. When a company is being drilled in marching, a sergeant distinguished for precision in marching is selected, who is called a directing sergeant, and placed in front of the guide on the line

established. ed on the columns of Trajan the direction is, and abound in all museums. selected by flint, which was their earliest The right 87, they are usually called *celts*. straight in the of France, in the depart-

Direction. The right bank of the nifies the line or pa. taken by Louis XI., along which it endeav. the town was de- according to the propell. habitants were given to it.

Direction. In gunnery, is that of pointing which relates to the movement of the piece around an imaginary vertical axis. The direction is given when the plane of sight passes through the object. Elevation is a movement about a horizontal axis.

Directory. In the history of France, the name given by the constitution of 1795, to an executive body composed of five members of the French republic. They assumed authority in a moment of immense peril. France was environed with gigantic adversaries, while distrust, discontent, and the malice of rival factions made her internal administration almost hopeless. The frantic heroism of her soldiers saved her from spoliation by the foreigner; but, on the contrary, the home policy of the Directory was deplorable. In 1799 the Directory was overthrown by the *coup d'état* of the 18th Brumaire, November 9, 1799, and was succeeded by the Consulate.

Dirk. Is a short dagger which at various times and in various countries has been much used as a weapon of defense. It is still worn by Highland regiments in the British service.

Dirk-knife. A clasp-knife, having a large, dirk-like blade.

Disability. State of being disabled; want of competent physical or intellectual power. When a soldier becomes disabled from exposure, accidents, or other causes, he is discharged from the service on a surgeon's certificate of disability, which enables him to draw a pension.

Disarm. To deprive of arms; to take away the weapons of; to deprive of the means of attack or defense.

Disarmament. The act of disarming.

Disarmed. Soldiers divested of their arms, either by conquest, or in consequence of some defection.

Disarmer. One who disarms.

Disarray. To throw into disorder; to break the array of.

Disarray. Want of array or regular order; disorder.

Disbanding. Is the breaking up of a military organization and the discharge of soldiers from military duty.

Disbursing Officer. An officer whose special function is to make disbursements of money.

Discharge. From military service, is obtained by non-commissioned officers and privates by expiration of term of service, which varies in different countries; on surgeon's certificate of disability, and by spe-

they surrendered the fort on the 16th. About 10,000 prisoners, 40 pieces of artillery, and a large quantity of stores of all kinds fell into Gen. Grant's hands.

Dongola, New, or Maraka. A town on the Nile, and capital of a province of the same name, in Nubia. Ibrahim Pasha took it from the Mamelukes in 1820.

Donjon, or Dungeon. The principal tower or keep of a castle or fortress. It was so called either from being placed on a elevation, natural or artificial, or because of its conduct, etc. This is the technical meaning. In a higher sense discipline is the *habit of obedience*. The soldier acquires the habit of subordinating his own will, pleasure, and inclinations to those of his superior. When the habit has become so strong that it is second nature, the soldier is disciplined.

Discomfit. Defeat, rout, overthrow.

Discretion. *Se rendre à discrétion*, surrendering unconditionally to a victorious enemy.

Disembarkation. The act of landing troops from a boat or ship. The term has lately been applied to the act of quitting a railway train.

Disembody. To disarm a military body, and to dispense with its services.

Disengage. To separate the wings of a battalion or regiment, which is necessary when the battalion countermarches from its centre and on its centre by files. It likewise means to clear a column or line which may have lost its proper front by the overlapping of any particular division. It also signifies to extricate oneself and the troops commanded from a critical situation. It likewise means to break suddenly from any particular order in line or column, and to repair to some rallying-point.

Disengage. In fencing, means to quit that side of an adversary's blade on which one is opposed by his guard, in order to effect a cut or thrust where an opportunity may present.

Disgarnish. To take guns from a fortress.

Disgarrison. To deprive of a garrison.

Dishelm. To deprive of the helmet; to take the helmet from.

Dish of a Wheel. Is the inclination outward of the spokes when fastened in the nave.

Dislodge. To drive an enemy from a position.

Dismantle. To render fortifications incapable of defense, or cannon unserviceable.

Dismiss. To discard, or deprive an officer of his commission or warrant. See APPENDIX, ARTICLES OF WAR.

Dismount. To dismount the cavalry is to use them as infantry. Guards, when relieved, are said to dismount. They are to be marched with the utmost regularity to the parade-ground where they were formed, and from thence to their regimental or company parades, previously to being dismissed

name of the highest magistrate of the Latin Confederation, and in some of the Latin towns the title was continued long after these towns were subjected to the dominion of Rome. In the Roman republic the dictator was an extraordinary magistrate, irresponsible and endowed with absolute authority. The dictatorship could not lawfully be held longer than six months. Dictators were only appointed so long as the Romans had to carry on wars in and out of Italy, or when any vigorous measure required. **Drift-sight.** A natural angle of sight to a radius equal to the distance from the rear of the base-ring, or base-line, to the highest point of the swell of the muzzle, measured parallel to the axis. For convenience the muzzle sight is usually made equal in height to the dispart in modern guns,—giving a natural line of sight parallel to the axis of the piece.

Dispatches. Official messages. In war, important dispatches which have to pass through the enemy's country, or in the vicinity of his forces, are only intrusted to officers to whom their contents can be confided. Dispatches are frequently in cipher, especially when telegraphed or signaled with a liability to interception. See **DESPATCH**.

Disperse. To scatter any body of men, armed or unarmed, who may have assembled in an illegal or hostile manner. The cavalry are generally employed on these occasions.

Displaced. Officers in the British service are sometimes displaced from a particular regiment in consequence of misconduct, but they are at liberty to serve in any other corps.

Display, To. In a military sense, is to extend the front of a column, and thereby bring it into line.

Displayed. In heraldic usage, means expanded; as, an eagle displayed, or what is commonly known as a spread eagle.

Displume. To deprive of decoration or ornament; to degrade.

Dispose. To dispose cannon, is to place it in such a manner that its discharge may do the greatest mischief.

Disposition. In a general sense, is the just placing of an army or body of men upon the most advantageous ground, and in the strongest situation, for a vigorous attack or defense.

Disposition de Guerre (Fr.). Warlike arrangement or disposition. Under this head may be considered the mode of establishing, combining, conducting, and finally terminating a war, so as to produce success and victory.

Disrespect to a Commanding Officer. See **APPENDIX, ARTICLES OF WAR, 20**.

Disrespectful Words. See **APPENDIX, ARTICLES OF WAR, 19**.

Distance. In military formation, signifies the relative space which is left between men standing under arms in rank, or the interval which appears between those ranks.

Distance of the Bastion. In fortifica-

water; also a dam or mound; exterior pollution. Dikes differ from former being intended only to **POINTING**.

flowing of other water into rally, any di-confine the stream by means the purposes of pieces of timber, or a doublents made for the the intervals of which

stones, or pebbles. One of those portions **Dimachæ.** Entry is divided, for the conwere a kin^d command, and to insure a co-drawtion between distant bodies of troops.

Disvelloped, or Developed. Are heraldic terms applied to the colors of a regiment, or army, when they are flying.

Ditch. In fortification, is an excavation made round the works, from which the earth required for the construction of the rampart and parapet is obtained. Ditches are of two kinds, wet and dry; but in modern fortification the dry ditch is considered preferable to the wet one. When the excavation is on the side farthest from the enemy it is called a trench.

Diu. A once celebrated island and fortress of Hindostan, in the peninsula of Kattywar. In 1515 the Portuguese gained possession of it; they fortified it, and in ten years rendered it impregnable against all the powers of India. With the decline of Portuguese power it fell into decay, and was plundered by the Arabs of Muscat in 1670.

Diversion. An attack upon an enemy in a place where he is weak and unprovided, in order to draw off his forces from making an irruption elsewhere; or a manœuvre, where an enemy is strong, which obliges him to detach part of his forces to resist any feint or menacing attempt of his opponent.

Divest. To strip of clothes, arms, or equipage.

Divine Service. See **APPENDIX, ARTICLES OF WAR, 52**.

Division. In military matters, is one section of an army, comprising 2 or more brigades, commanded by a general officer. In regimental formation, 2 companies of a regiment or battalion constitute a division, when in column.

Dizier, St. A town of France, on the Marne. The emperor Charles V. besieged and took this place in 1544; and in its neighborhood Napoleon defeated the allies in two battles fought January 27 and March 26, 1814.

Djokjokarta. A Dutch residency of Java, near the middle of the south coast of that island. The town of the same name is the seat of a Dutch resident and a native sultan, who has a body-guard of young females, completely armed and equipped, some of whom do duty on horseback. It was taken by the British in 1812.

Dobrudscha (anc. Scythia Minor). A name used to denote the northeastern portion of Bulgaria. The Dobrudscha has long been a famous battle-ground. Some of the earliest incidents of the Russian war of 1854-56 took place here.

Dolabra. A rude ancient hatchet. They

are represented on the columns of Trajan and Antoninus, and abound in all museums. When made of flint, which was their earliest and rudest form, they are usually called *celts*.

Dôle. A town of France, in the department of Jura, on the right bank of the Doubs. In 1479 it was taken by Louis XI., when the greater part of the town was destroyed, and many of its inhabitants were put to the sword. It subsequently came into the hands of the Spaniards, and was fortified by Charles V. in 1580. In 1686 it was ineffectually besieged by the Prince of Condé. In 1668 it was taken by the French; and again in 1674, when its fortifications were destroyed.

Dolphins. Two handles placed upon a piece of ordnance with their centres over the centre of gravity, by which it was mounted or dismounted. They are no longer in use in the U. S. service.

Domingo, San. The capital of the Spanish part of the island of Hayti, in the West Indies. About the year 1686 the city was sacked by Sir Francis Drake.

Dominica. An island in the West Indies, belonging to the Leeward group, lying about 20 miles to the north of Martinique. This island was discovered by Columbus in 1498, and was claimed alternately by England, France, and Spain: it was finally ceded to Great Britain in 1763.

Dommage (Fr.). In a general acceptance of the term, signified in the old French service, the compensation which every captain of a troop, or company, was obliged to make in consequence of any damage that their men might have done in a town, or on a march.

Donabue. A town in India, in the British province of Pegu. In 1825, during the Burmese war, it maintained a successful resistance against the assault of a British force under the command of Brigadier Cotton; and here in 1853, during the last war with the same nation, the British troops suffered a repulse in an encounter with a Burmese force, losing several officers.

Donauwörth. A town of Bavaria, situated at the confluence of the Wernitz and the Danube. Here Marlborough stormed and carried the intrenched camp of the Bavarians in 1704, and on October 6, 1806, the French under Soult obtained a victory over the Austrians under Mack.

Donelson, Fort. A position on a slight bend of the Cumberland River, in Tennessee, which was strongly fortified by the Confederates during the civil war. On the afternoon of February 14, 1862, Commodore Foote commenced with his gunboats an attack on this place, but met with a decided reverse. Meantime, Gen. Grant's army, advancing from the capture of Fort Henry, gradually approached, and surrounded the fort, with occasional skirmishing on the line. Next day the Confederates attacked them, but were repulsed with loss, and finding all hope of reinforcements unavailing,

they surrendered the fort on the 16th. About 10,000 prisoners, 40 pieces of artillery, and a large quantity of stores of all kinds fell into Gen. Grant's hands.

Dongola, New, or Maraka. A town on the Nile, and capital of a province of the same name, in Nubia. Ibrahim Pasha took it from the Mamelukes in 1820.

Donjon, or Dungeon. The principal tower or keep of a castle or fortress. It was so called either from being placed on a *dun* or elevation, natural or artificial, or because, from its position, it dominated or commanded the other parts of the fortress. From the circumstance that the lower or under-ground story of the donjon was used as a prison, has come the modern meaning of the word dungeon.

Doolee. A palanquin litter, used in Indian armies, to carry sick and wounded men.

Dormans. In Northeast France. The Huguenots and their allies under Montmorency were here defeated by the Duke of Guise, October 10, 1576.

Dormant. (Fr.). Sleeping. In heraldic representation, an animal *dormant* has its head resting on its fore-paws, whereas an animal *couchant* has its head erect.

Dornach. A village of Switzerland, 20 miles northeast from Soleure, remarkable for the victory obtained by the Swiss over the Austrians, July 22, 1499, and which gave Switzerland her independence.

Dorogoboozh, Dorogobush, or Dorogobouge. A town of Russia, in the government of Smolensk. At this place the French were defeated by the Russians, October 12, 1812.

Dosser. In military matters, is a sort of basket, carried on the shoulders of men, used in carrying the earth from one part of a fortification to another, where it is required.

Dossière (Fr.). Back-piece of a cuirass.

Douai, or Douay. A fortified town of France, on the small river Scarpe, 18 miles south from Lille. This place was taken from the Flemings by Philip the Fair in 1297; restored by Charles V. in 1368. It reverted to Spain, from whom it was taken by Louis XIV. in 1667. It was captured by the allies, under the Duke of Marlborough and Prince Eugène, in 1710, but was retaken by the French, September 8, 1712.

Double. To unite, as ranks or files, so as to form one. *To double upon*, to inclose between two fires.

Double-quick. Performed in the time called double-quick; as, a double-quick step or march.

Double-quick. To move, or cause to move, in double-quick time.

Double-rank. A line formed of double files.

Double-shell. A shell used in the 7-inch English rifles. It is 27 inches long, and has a large cavity. To strengthen it against outside pressure it has three internal longitudinal ribs projecting about an inch into the cavity.

Double-shotting. Is an increase of the destructive power of ordnance by doubling the shot fired off at one time from a gun. Sometimes three shots are fired at once, in which case the piece is said to be *treble-shotted*.

Double-time. The fastest time or step in marching, next to the run, requiring 165 steps, each 33 inches in length, to be taken in one minute. The degree of swiftness may vary in urgent cases, and the number of steps be thus increased up to 180 per minute.

Doubling. The putting of two ranks of soldiers into one.

Doublings. The heraldic term for the linings of robes or mantles, or of the mantlings of achievements.

Doullens. A town of France, 15 miles northeast of Amiens. This place was taken by the allies in 1814.

Doune. A village of Perthshire, Scotland. The ruins of Doune Castle, a large and massive fortress built about the 14th century, are situated on the point of a steep and narrow elevation. Doune was held for Prince Charles in 1745, and here he confined his prisoners taken at Falkirk, among the rest the author of the tragedy of "Douglas."

Douro. A large river in Spain and Portugal, which was crossed in 1809 by the British army under the Duke of Wellington, when he surprised the French under Marshal Soult, and won the battle of Oporto.

Dover (anc. *Dubris*). A city and seaport of England, in the county of Kent, on Dover Strait. The city is defended by Dover Castle, which is built on chalk-cliffs 820 feet high, and is a fortress of great strength and extent. The castle is said to have been founded by the ancient Romans. Near here Julius Caesar is said to have first landed in England, August 26, 55 B.C., and here King John resigned his kingdom to Pandolf, the pope's legate, May 18, 1213.

Dowletabad. A celebrated city and fortress of Hindostan, province of Hyderabad, deemed impregnable by the natives; but notwithstanding its strength, it has been frequently taken.

Drabants. A company of 200 picked men, of which Charles IX. of Sweden was captain.

Draft. A selecting or detaching of soldiers from an army, or any part of it, or from a military post; also from any company or collection of persons, or from the people at large for military service.

Draft. See DRAUGHT.

Draft, To. To draw from a military band or post, or from any company, collection, society, or from the people at large; to detach; to select. Written also *draught*.

Dragon. An old name for a musketoon.

Dragon et Dragon Volant (*Fr.*). Some old pieces of artillery were anciently so called. The Dragon was a 40-pounder; the Dragon Volant a 32-pounder. But neither the name nor the size of the caliber of either piece is now in use.

Dragonner (*Fr.*). According to the French acceptation of the term, is to attack any person in a rude and violent manner; to take anything by force; to adopt prompt and vigorous means; and to bring those people to reason by hard blows, who could not be persuaded by fair words.

Dragoon. From the old fable that the dragon spouts fire, the head of the monster was worked upon the muzzle of a peculiar kind of short muskets which were first carried by the horsemen raised by Marshal Brissac in 1600. This circumstance led to their being called dragoons; and from the general adoption of the same weapon, though without the emblem in question, the term gradually extended itself till it became almost synonymous with horse-soldier. Dragoons were at one time a kind of mounted infantry, drilled to perform the services both of horse and foot. At present, dragoon is simply one among many designations for cavalry, not very precise in its application. This term is not now used in the U. S. service.

Dragoon, To. Is to persecute by abandoning a place to the rage of the soldiers.

Dragoon Guards. In the British service, seven regiments of heavy cavalry bear this title.

Drag-rope. This is a 4-inch hemp rope, 28 feet long, with a thimble worked into each end, one of the thimbles carrying a hook. Six handles, made of oak or ash, are put in between the strands of the rope, and lashed with a marline. It is used to assist in extricating carriages from different positions by the men, for dragging pieces, etc.

Drag-rope Men. The men attached to light or heavy ordnance, for the purpose of expediting movements in action. The French *servans à la prolonge* are of this description.

Drain, or Drein. In the military art, is a trench made to draw water out of a ditch, which is afterwards filled with hurdles and earth, or with fascines or bundles of rushes, and planks, to facilitate the passage over the mud.

Drake. A small piece of artillery, no longer used.

Draught. The act of drawing men from a military band, army, or post, or from any company or society; draft; detachment; also, formerly, a sudden attack or drawing upon an enemy.

Draughted. The soldiers of any regiment allotted to complete other regiments are said to be draughted, or drafted.

Draught-hook. Either of two large hooks of iron fixed on the cheeks of a gun-carriage, two on each side, used in drawing the gun backward and forward.

Drawbridge. A bridge of which the whole or part is made to be let down, or drawn or turned aside, to admit or hinder communication at pleasure, as before the gate of a town or castle. It is called *bascule*, *swivel*, or *rolling* bridge according as

it turns on a hinge vertically, on a pivot horizontally, or is pushed lengthwise on rollers.

Drawing. In a military sense, is the art of representing the appearances of all kinds of military objects by imitation or copying, both with and without the assistance of mathematical rules.

Drawn Battle. A fight from which the combatants withdraw without either side claiming the victory.

Draw off, To. In a military sense, means to retire; also to abstract or take away; as, to draw off your forces. To draw on is to advance; also to occasion; as, to draw on an enemy's fire. To draw over is to persuade to revolt; to entice from a party. To draw out is to call the soldiers forth in array for action. To draw up is to form in battle array. To draw out a party is to assemble any particular number of armed men for military duty. The French say, *faire un detachment*.

Drayton-in-Hales, or Market Drayton. A town of England, in Shropshire. Here the partisans of the house of York defeated the Lancastrians in 1459.

Dresden. The capital of the kingdom of Saxony, and one of the best built towns of Europe. Taken by Frederick of Prussia in 1756; by the Austrians in 1759; bombarded in vain by Frederick, July, 1760. On August 26-27, 1813, the allies were defeated in a terrible battle by the French under the walls of this city; and about a mile from it is a granite block, surmounted by a helmet, marking the spot where Moreau fell in the conflict, while conversing with the emperor Alexander.

Dress. A word of command for alignment of troops; also of the alignment itself.

Dressers. See GUIDES.

Dress, Full. Dress uniform. The French is *grande tenue*, or *grande uniforme*.

Dress Parade. Parade in full uniform; one of the ceremonies prescribed in tactics.

Dress, To. To cause a company or battalion to take such a position or order as will preserve an exact continuity of line in the whole front, or in whatever shape the command is to be formed. Soldiers dress by one another in ranks, and the body collectively by some given object. To dress the line is to arrange any given number of soldiers, so as to stand perfectly correct with regard to the several points of an alignment that have been taken up.

Dress Uniform. The dress prescribed for occasions of ceremony.

Dreux. An old town of France, in the department of the Eure and Loire, on the Blaise. In 1188 this town was burned by the English; and in 1562 the Prince of Condé was taken prisoner in a severe action fought between the Huguenots and Roman Catholics in its neighborhood.

Drift. A tool used in driving down compactly the composition contained in a rocket, or like firework.

Drift. A deviation peculiar to oblong rifle projectiles. See PROJECTILES.

Drill. Is a general name for the exercises through which soldiers and sailors are passed, to qualify them for their duties. There are many varieties of drill,—that of the cavalry, infantry, and artillery,—all have different drills conformable to their different organizations.

Drill-Sergeant. A non-commissioned officer, whose office it is to instruct soldiers as to their duties, and to train them to military evolutions.

Drogheda. A seaport town of Ireland, in the counties of Meath and Louth, built on both sides of the Boyne. From the 14th to the 17th century, Drogheda was the chief military station in Ulster. In 1641 the town was besieged by O'Neal and the northern Irish forces, but was gallantly defended by Sir Henry Tichbourne, and after a long blockade relieved by the Marquis of Ormond, who also relieved it a second time when invested by the Parliamentary army under Col. Jones. In 1649, Cromwell was twice repulsed in besieging this town; but in the third attempt he was successful, when most of the garrison were slaughtered. This place surrendered to William III. the day after the battle of the Boyne, which was fought in 1690 at Oldbridge, 4 miles west of Drogheda.

Drum. A musical instrument of percussion, formed by stretching a piece of parchment over each end of a cylinder formed of thin wood, or over the top of a caldron-shaped vessel of brass; the latter is hence called a kettle-drum. The large drums which are beaten at each end are called *double drums*, or *bass drums*, and are used chiefly in military bands. Kettle-drums are always used in pairs; one of which is tuned to the key-note, the other to the fifth of the key. The drum is principally used for military purposes, especially for inspiring the soldiers under the fatigue of march or in battle. It is supposed to be an Eastern invention, and to have been brought into Europe by the Arabians, or perhaps the Moors. In the French army the drum is now, to some extent, abolished.

Drum. To execute on a drum, as a tune;—with *out*, to expel with beat of drum; as, to drum out a deserter, etc.; with *up*, to assemble by beat of drum; to gather; to collect; as, to drum up recruits, etc.

Drumclog. In Western Scotland; here the Covenanters defeated Graham of Claverhouse, June 1, 1679. An account of the conflict is given by Walter Scott, in "Old Mortality."

Drum-head. The head or upper part of a drum.

Drum-head Court-martial. A court-martial called suddenly by the commanding officer to try offenses committed on the line of march, and which demand an immediate example. This method is not resorted to in time of peace.

Drum-Major. Is that person in a regiment of infantry who has command of the drummers and teaches them their duty. He also directs the movements of the regimental band, while on parade.

Drummer. The soldier who plays a drum. The majority of drummers are boys, generally the sons of soldiers. In former times it was the part of a drummer's duty to flog men sentenced to corporal punishment.

Drumming Out. The ceremony of ignominiously discharging a soldier from the service. The culprit is marched out of the garrison at the point of the bayonet, the drummers or musicians playing the "Rogue's March."

Drum-stick. A stick with which a drum is beaten, or shaped for the purpose of beating a drum.

Drunk on Duty. See APPENDIX, ARTICLES OF WAR, 88.

Druses. A warlike people dwelling among the mountains of Lebanon, derive their origin from a fanatical Mohammedan sect which arose in Egypt about 996, and fled to Palestine to avoid persecution. They now retain hardly any of the religion of their ancestors. In 1860, in consequence of disputes, the Druses attacked their neighbors, the Maronites, whom they massacred, it was said, without regard to age or sex. This led to a general massacre of Christians soon after. But the Turkish troops, with French auxiliaries, interfering on behalf of the Christians, invaded Lebanon in August and September, when the Druses surrendered, giving up their chiefs. January, 1861.

Dry Camp, To Make a. Troops on the march are said to *make a dry camp* when they are compelled by exhaustion, or other causes, to camp at a place where there is no water. For such camps water is usually transported with the troops.

Dualin. See EXPLOSIVES.

Dubicza, or Dubitzs. A town and fort of European Turkey, in Bosnia, on the Unna. The Austrians took this town in 1788.

Dublin. The capital city of Ireland, on the Liffey, close to its entrance into Dublin Bay. It is alleged that this city has been in existence since the time of Ptolemy. In the earlier part of the 9th century, Dublin was taken by the Danes, who infested it for several centuries thereafter. In 1169 it was taken by storm by the English under Strongbow. From about this period the history of Dublin is that of Ireland.

Ducenarius. An officer in the Roman armies who commanded two centuries.

Dudgeon. A small dagger (rare).

Duel. Was the old form of a combat between two persons, at a time and place indicated in the challenge, cartel, or defiance borne by one party to the other. A duel generally takes place in the presence of witnesses, called seconds, who regulate the mode of fighting, place the weapons in the hands of the combatants, and enforce com-

pliance with the rules which they have laid down. In the United States the practice of fighting duels, being declared illegal by statutes, is very seldom resorted to.

Dueling. See APPENDIX, ARTICLES OF WAR, 26, 27.

Duffadar. A rank in the East Indian Native Cavalry, corresponding with that of sergeant.

Duffadar, Kot. A non-commissioned officer in the East Indian Native Cavalry, corresponding with a troop sergeant-major.

Duffadar Major. A rank in the East Indian Native Cavalry, corresponding with that of regimental sergeant-major.

Duke. From the Latin *dux*, a "leader," a title that first came into use when Constantine separated the civil and military commands in the provinces. This title was successively borrowed by the Goths and Franks, and since the time of the Black Prince, who was created first duke in England (Duke of Cornwall) in 1335, it has been a title of the nobility, ranking next below the blood royal.

Dukigi-Bachi. Second officer in the Turkish artillery, who commands the Topelas, or gunners and foundlers.

Duledge. A peg of wood which joins the ends of the felloes, forming the circle of the wheel of a gun-carriage; and the joint is strengthened on the outside of the wheel by a strong plate of iron, called the *duledge plate*.

Dumdum. The name of a town and of a valley in India, well known in the military history of the country; it is 8 miles to the northeast of Calcutta, having extensive accommodations for troops, and a cannon-foundry. The place is famous in connection with the mutiny of 1857, as the scene of the first open manifestation on the part of the Sepoys against the greased cartridges.

Dumfries. A royal burgh and parish of Scotland, the capital of Dumfriesshire, on the Nith. This town was exposed to repeated calamities from the invasions of the English during the border wars. In this town John Comyn, the competitor for the Scottish throne, was stabbed by Robert Bruce in 1305.

Dünaburg. A strongly fortified town of Western Russia, on the Düna. It is of great military importance, owing to the strength of its fortifications. It was founded by the Knights of the Sword in 1277.

Dunbar. A seaport town of Scotland, in Haddingtonshire, at the mouth of the Frith of Forth. On the high rocks at the entrance to the new harbor are a few fragments of the ruins of an old castle, which was once very strong, and an important security against English invasions. Edward I. took it, and Edward II. fled thither after the battle of Bannockburn; it was demolished in 1338, and rebuilt in 1386; it was successfully defended in a siege of six weeks against the Earl of Salisbury by Black Agnes, countess of Dunbar, in 1388; it sheltered Queen Mary

and Bothwell in 1567; and in the same year it was destroyed by the regent Murray. In 1650, Cromwell, at the "Race of Dunbar," defeated the Scottish army under Leslie.

Dunblane, or Dumbiane. A town and parish of Scotland, in Perthshire, on the Allan. Not far from this place is Sheriffmuir, where, in 1715, a battle was fought between the royal troops and the followers of the Pretender.

Dungan Hill (Ireland). Here the English army, commanded by Col. Jones, signally defeated the Irish, of whom 6000 are said to have been slain, August 8, 1647.

Dungeon (originally *Donjon*, which see). A prison; a dark and subterranean cell or place of confinement.

Dunkirk. A fortified seaport town in the extreme northern part of France, in the department of the North. In 1558 the English, who had for some time held possession of the town, were expelled from it by the French, who, in the ensuing year, surrendered it to the Spaniards. In the middle of the 17th century it once more passed into the hands of the French, who, after a few years' occupation of it, again restored it to Spain. In 1658 it was retaken by the French and made over to the English. It was sold to the French king by Charles II. in 1662. In 1793 it was attacked by the English under the Duke of York, who, however, was compelled to retire from before its walls with severe loss.

Dunnottar. A parish of Scotland, in Kincardineshire. It contains the castle of Dunnottar, now in ruins. In the time of the civil wars, this was the fortress in which the Scottish regalia were deposited. After being besieged by Cromwell's forces for six months, it capitulated; but, before this, the regalia were secretly conveyed from it.

Dunsinane. In Perthshire, Scotland. On the hill was fought the battle between Macbeth, the thane of Glamis, and Siward, earl of Northumberland, July 27, 1054. Macbeth was defeated, and it was said pursued to Lumphanan in Aberdeenshire, and there slain, 1056 or 1057.

Durazzo (anc. *Epidamnus*). A town of Albania, European Turkey. It is fortified, and is a place of considerable antiquity. Durazzo was founded about 627 B.C. by a conjoined band of Corcyreans and Corinthians under one Phaleus, a Heracleidan. It became a great and populous city, but was much harassed by the internal strifes of party, which ultimately led to the Peloponnesian war. Under the Romans it was called *Dyrrachium* (whence its modern name). Here Pompey was for some time beleaguered by Cæsar. In the 5th century it was besieged by Theodoric, the Ostro-Goth; in the 10th and 11th centuries by the Bulgarians; and in 1081 it was captured, after a severe battle, by the Norman, Robert Guiscard of Apulia.

Düren. A town of Prussia, on the Roer. This was a Roman town, and is mentioned

by Tacitus by the name of *Marcodurum*. Charlemagne held two diets here in 775 and 779, when on his way to attack the Saxons. It was taken by assault and burned by Charles V., after an obstinate resistance, in 1548. In 1794 it fell into the hands of the French, but was ceded to Prussia in 1814.

Dürkeim. A town of Rhenish Bavaria, 20 miles north from Landau. The summit of a height near this town is crowned by a rampart of loose stones 6 to 10 feet high, 60 to 70 feet wide at the base, and inclosing a space of about two square miles called the *Heidenmauer* ("heathens' wall"), which the Romans are said to have built to keep the barbarians in check, and where Attila is said to have passed a winter, after having wrested the fortress from the Romans, when passing on his way to Rome.

Durrenstein. A town of Austria, on the Danube. In the neighborhood, on a rock, are the ruins of the castle in which Richard Cœur de Lion was imprisoned in 1192. In 1805 the Russian and Austrian armies were defeated here by the French.

Duties. This word is used in military parlance to express the men paraded for any particular duty, such as guards, etc.

Duty. There is no word oftener used in military parlance than this. In the technical sense it refers to the various services necessary for the maintenance, discipline, and regulation of armies,—as *signal duty*, *staff duty*, *the duties of a sentinel*, etc. To be *on duty* is to be in the active exercise of military functions; to be *off duty* is to have these functions temporarily suspended; to be *put on duty* is to be assigned to duty by order of a superior. Military duties are variously classed as *duties of detail*, which are recurring and governed by a roster, such as guard, fatigue, etc.; *special duties* which are determined by appointment, selection, or order; *extra duty*, continuous special duty of enlisted men, entitling them to pay; *daily duty*, short terms of special service for enlisted men. In a higher and broader sense *duty* is that which is due one's country. It covers all the soldier's obligations, and forms his simplest and sublimest rule of action.

Dyer Projectile. See **PROJECTILE**.

Dynamite, called in the United States "giant powder," is formed by mixing nitro-glycerine with certain porous substances, and especially with certain varieties of silica or alumina, these substances absorbing the nitro-glycerine. It was invented in 1867 by the Swedish engineer Nobel, who proposed to prevent the frequent and unexpected explosions of nitro-glycerine, at the same time without sacrificing any of its power. This he effected by the use of certain silicious earths as a base for the absorption of the nitro-glycerine, the experiment resulting in the new compound which he called dynamite, its transportation and handling being no more dangerous than that of ordinary gunpowder. It is not liable to spontaneous explosion like pure nitro-glycerine, nor can

it be exploded by moderate concussion; when unconfined, if set fire to, it will burn without explosion; it may be safely kept at any moderate temperature; is inexplusive when frozen, and acts effectively under water. Its effects are proportional to the quantity of nitro-glycerine held in absorption; but under circumstances where a sustained bursting pressure is required, not being as instantaneous in its action as nitro-glycerine, its effects are more powerful than those of an equal weight of the pure material. The best absorbent of nitro-glycerine for the formation of dynamite is a silicious earth found at Oberlohe, Hanover. During the siege of Paris, a scientific committee of investigation, engaged in experimenting on different substances as a substitute for this earth, selected as the best silica, alumina, and boghead cinders. Any of these, they declared, when combined with nitro-glycerine, formed a substance which possessed all the remarkable qualities attributed to the dynamite of Nobel. During the siege of Paris dynamite was used successfully by the French engineers to free a flotilla of gunboats caught in the ice on the Seine, below Charenton, by simply placing a quantity of it on the surface of the ice. The explosion dislodged the ice for a great distance, and the masses thus loosened, being directed into

the current by the aid of a small steamer, floated down the stream, and left the river open. There are various other compounds of nitro-glycerine, such as dualin, glyoxiline, etc., all differing in the matter used as a base, they being generally some explosive substances; but none of them appears to have come into such general use or to be as reliable as dynamite. Many preparations of chlorate and picrate of potassium have also been used from time to time as explosive agents; but their great sensibility to friction or percussion renders them extremely dangerous; they are, therefore, not liable to come into general use. A preparation of potassium chlorate and sulphur, not liable to explode by concussion, but very sensitive to friction, is used with great effect as a charge for explosive bullets.

Dynamometer. An instrument for measuring the force of recoil in a small-arm, consisting usually of a spiral spring so arranged as to be compressed by the butt of the gun in firing. An index shows the number of pounds required to produce a similar compression. The instruments now used by the U. S. Ordnance Department are graduated to show the effect of the recoil in *foot-pounds* or *units of work*. This sensible change was made at the suggestion of Lieut. Henry Metcalfe of that department.

E.

Eagle. In heraldry, is used as an emblem of magnanimity and fortitude. In the Roman armies the eagle was used as a military standard, and even previous to that time the Persians under Cyrus the Younger used the same military emblem. In modern times, France, Russia, Prussia, Austria, and the United States have adopted the eagle as a national military symbol. The Austrian eagle is represented as double-headed.

Eagle, Black. A Prussian order of knighthood, founded in 1701; united with the order of the Red Eagle, or order of Sincerity, instituted by the margraves of Bayreuth.

Earl Marshal. Of England, is one of the officers of state; is the head of the college of arms, which has jurisdiction in descents and pedigrees; determines all rival claims to arms; and he grants armorial-bearings, through the medium of the kings-of-arms, to parties not possessed of hereditary arms.

Early Cannon. See **ORDNANCE, HISTORY OF.**

Earth-bag. See **BAGS.**

Earth-house, or Eird-house. The name

generally given throughout Ireland and Scotland to the underground buildings (which in some places are called also "Picts' houses") which served to hide a few people and their goods in time of war. The earth-house is a single irregularly-shaped chamber, from 4 to 10 feet in width, from 20 to 60 feet in length, and from 4 to 7 feet in height, built of unhewn and uncemented stones roofed by unhewn flags, and entered from near the top by a rude doorway, so low and narrow that only one man can slide down through it at a time. Implements of various kinds have been found in them,—such as bronze swords, gold rings, etc.

Earthworks. In fortification, is a general name for all military constructions, whether for attack or defense, in which the material employed is chiefly earth.

East Indian Army. In 1861 the British Secretary of State for India brought forward a measure for reorganizing the Indian army, which has been passed into a law. The British portion of the Indian army is to form part of the queen's army generally, with certain honorary distinctions, and is to take its turn at home and in the colonies like

the rest; but the expenses are to be paid out of Indian, not Imperial revenues. The native portion is to be wholly in India; in its reconstruction many improvements are made to lessen the chances of future revolt.

Ebersberg, or **Ebelsberg**. A town of Upper Austria, on the Traun, 8 miles northwest from Ens, remarkable for being the scene of the defeat of the Austrians by the French in 1809.

Eboulement (*Fr.*). The crumbling or falling of the walls of a fortification.

Ebro. A river in Spain, the scene of a signal defeat of the Spaniards by the French under Lannes, near Tudela, November 23, 1808; and also of several important movements of the allied British and Spanish armies during the Peninsular war (1809-18).

Eccentric. A device applied to the truck wheels of top carriages and beds of mortars in sea-coast artillery to give either rolling or sliding friction at will. The wheels turn on axle-arms which project eccentrically from the ends of an axle passing through both cheeks; when the axle is turned the axle-arms carry the wheels up or down; when at the lowest point the weight of the carriage is borne by the wheels, and the system moves on rolling friction; the wheels are then said to be *in gear*; when *out of gear*, or at their highest points, the wheels do not touch the rails or platform plates, but the cheeks rest on them, and the carriage moves upon sliding friction. A similar device is attached to the chassis near the pintle to enable it to be readily traversed when *in gear*, and give it stability when *out of gear*.

Eccentric Projectiles. A spherical projectile in which the centre of inertia does not coincide with the centre of figure. Such projectiles are subject to great deviations, which can be predicted as to direction by knowing the position of the centre of inertia of the shot in the bore of the gun. (See **PROJECTILES**, **DEVIATION OF**.) The side of the ball upon which the centre of inertia lies can be found by floating it in a bath of mercury, and marking the highest point where it comes to a state of rest; the centre of inertia lies nearest the opposite side; its exact position is determined by a kind of balance called the *eccentrometer*; the ball is placed in the balance with the marked point nearest the fulcrum; the distance of the centre of inertia or gravity from the fulcrum is obtained by dividing the product of the counterbalancing weight and its distance from the fulcrum by the weight of the projectile.

Echarge, **Feu**, or **Feu d'Echarge**. Is employed to signify that a column of troops is struck at a very oblique angle.

Echaugette. In military history, signifies a watch-tower, or kind of sentry-box.

Echelon. A military term applied to a certain arrangement of troops when several divisions are drawn up in parallel lines, each to the right or the left of the one preceding it, like "steps," or the rounds of a ladder, so that no two are on the same alignment.

Each division by marching directly forward can form a line with that which is in advance of it. There are two sorts of echelon, *direct* and *oblique*, the former of which is used in an attack or retreat.

Eckmühl, or **Eggmühl**. A small village of Bavaria, on the Great Laber. This place is celebrated for the important victory gained by the French over the Austrians on April 22, 1809, and which obtained for Davoust the title of Prince of Eckmühl.

Eclaireurs (*Fr.*). A corps of grenadiers raised by Bonaparte in France, who from their celerity of movements were compared to lightning.

Eclopes (*Fr.*). A military term to express those soldiers who, though invalids, are well enough to follow the army. Among these may be classed dragoons or horsemen whose horses become lame and cannot keep up with the troop or squadron. They always march in the rear of a column.

Ecole Polytechnique. A celebrated military school in Paris, established in 1794, chiefly for the artillery service. The examinations for the schools are public to all France. It not only furnishes officers of artillery, but also civil and military engineers of every description. The pupils of this school defended Paris in 1814 and 1830.

Economy. In a military sense, implies the minutiae or interior regulations of a regiment, troop, or company. Hence regimental economy.

Ecorcheurs (*Flayers*). A name given to bands of armed adventurers who desolated France and Belgium during the 15th century, beginning about 1435, and they at one time numbered 100,000. They are said to have stripped their victims to their shirts, and flayed the cattle. They were favored by the English invasion and the civil wars.

Ecoutes. Small galleries made at equal distances in front of the glacis of the fortifications of a place. They serve to annoy the enemy's miners, and to interrupt them in their work.

Ecreter (*Fr.*). To batter or fire at the top of a wall, redoubt, epaulement, etc., so as to dislodge or drive away the men that may be stationed behind it, in order to render the approach more easy. *Ecreter les pointes des palissades* is to blunt the sharp ends of the palisades. This ought always to be done before you attack the covert way, which is generally fenced by them.

Ecu (*Fr.*). A large shield which was used by the ancients, and carried on their left arm, to ward off the blows of sword or sabre. This instrument of defense was originally invented by the Samnites. The Moors had *ecus*, or shields, sufficiently large to cover the whole of their bodies. The *clipei* of the Romans only differed from the *ecu* in shape; the former being entirely round, and the latter oval.

Ecuador, or **Equator**. A South American republic, founded in 1831, when the Colombian republic was divided into three;

the other two being Venezuela and New Granada. Gen. Franco was here defeated in battle by Gen. Flores, August, 1860. Several insurrections have taken place in Ecuador since 1860.

Edessa, or Callinboe. An ancient city of Mesopotamia. In 1144 the Edessenes were defeated by the Saracen chief Nur-eddeen, and all who were not massacred were sold as slaves. After many vicissitudes, it fell successively into the hands of the sultans of Egypt, the Byzantines, the Mongols, Turkomans, and Persians; the city was finally conquered by the Turks, and has ever since formed a portion of the Turkish dominion. Its modern name is Oorfa.

Edge. The thin or cutting part of a sword or sabre.

Edgehill. An elevated ridge in Warwickshire, England, 7 miles northeast from Banbury. Here was fought, on Sunday, October 23, 1642, the first great battle of the civil war, between the royalist forces under Charles I. and the Parliamentarians under the Earl of Essex. Prince Rupert, who led the right wing, charged with his cavalry the left wing of the Parliamentarians, broke it, and pursued it madly to Keinton. Essex with his force defeated the right wing of the royalists.

Edinburgh. The metropolis of Scotland, situated about 1½ miles from the Firth of Forth. It was taken by the Anglo-Saxons in 482; retaken by the Picts in 695; city fortified and castle rebuilt, 1074; besieged by Donald Bane, 1093. The city was taken by the English in 1296; surrendered to Edward III. in 1356. It was burnt by Richard II., 1385, and by Henry IV., 1401. A British force landed from a fleet of 200 ships, in 1544, and burned Edinburgh. The castle surrendered to Cromwell in 1650. The young Pretender occupied Holyrood September 17, 1745, and the battle of Preston Pans took place September 21, 1745.

Effective. Fit for service; as, an army of 30,000 effective (fighting) men.

Efficient. A thoroughly trained and capable soldier. It is also a term used in connection with the volunteers. A volunteer is said to be efficient when he has performed the appointed number of drills and fired the regular number of rounds at the target, in the course of the year.

Egham. A village in the northwest of Surrey, 18 miles west of London. In the vicinity is Runnymede, a meadow on the Thames, where King John conferred with his barons before signing the Magna Charta in 1215.

Egypt. A country in Northeast Africa. On the division of the Roman empire (395 A.D.) Egypt became a part of the dominions of Arcadius, ruler of the Eastern empire. But, owing to religious feuds of the Jacobites and Melchites, it became a province of Persia (616) for twelve years. In 640 the governor, Makaukas, endeavored to make himself independent, and invited the arms

of the Arabs, and Amrou easily conquered Egypt. Although Alexandria was retaken by Constantine III., the Arabs drove him out and maintained their conquest, and Egypt remained an appenage of the caliphate. It afterwards passed into the dynasty of the Turks, and was administered by pashas. Constant rebellions of the Mamelukes, and the violence of contending factions, distracted the country for more than two centuries. The most remarkable event of this period was the French invasion by Bonaparte in 1798, which, by the conquest of Alexandria and the battle of the Pyramids against the Mamelukes, led to the entire subjection of the country, from which the French were finally expelled by the Turks and British in 1801, and the country restored to the Ottoman Porte. The rise of Mohammed Ali in 1806 imparted a galvanic prosperity to Egypt by the destruction of the Mamelukes, the formation of a regular army, and the introduction of European civilization. He considerably extended its boundaries, even into Asia; but in 1840 he was dispossessed of his Asiatic conquests. The treaty of London, however, in 1841, confirmed the viceroyalty of Egypt as a fief of the Ottoman empire to him and his descendants.

Ehrenbreitstein. A town and fortress of Rhenish Prussia, situated on the right bank of the Rhine, directly opposite Coblenz, with which it is connected by a bridge of boats. The fortress of Ehrenbreitstein occupies the summit of a precipitous rock 490 feet high, and has been called the Gibraltar of the Rhine, on account of its great natural strength and its superior works. It is capable of accommodating a garrison of 14,000 men, and provisions for 8000 men for ten years can be stored in its vast magazines. Ehrenbreitstein was besieged in vain by the French in 1688, but fell into their hands in 1799, after a siege of fourteen months. Two years after, the French, on leaving, at the peace of Lunéville, blew up the works. It was assigned, however, to Prussia by the Congress of Vienna in 1814, and under that country was restored and thoroughly fortified. It is now one of the strongest forts in Europe.

Eighty-ton Gun. A large Woolwich gun designed as an armament for the "Inflexible." Its construction was authorized in March, 1874, and the gun was ready for proof in October, 1875. When first made it weighed 81 tons, having a caliber of 14½ inches. It was bored during the progress of the experiments to 16 inches, and was given an enlarged chamber. The experiments were conducted by the celebrated "Committee on Explosion." See ORDINANCE, RECENT HISTORY OF.

Eilau-Preussisch. A town of Prussia, government of Königsberg. It is chiefly celebrated for the victory gained there by the French over the united Prussian and Russian armies, February 8, 1807.

Einsiedeln. A small town of Switzerland, in the canton of Schwytz. It contains a fine abbey, which was rifled by the French in 1798.

Ejector. The device used in breech-loading small-arms to throw out the metallic cartridge-case after it is fired.

Ejector Spring. The spring which operates an ejector.

El Arish. A village of Lower Egypt on the Mediterranean, on the route from Egypt to Syria. It is but little more than a fort and a few houses, and was taken by the French in 1799; and here the French general Kleber signed, in 1800, a convention with Sir Sydney Smith, engaging to leave Egypt with his troops.

Elath, or Eloth. A seaport situated at the head of that gulf of the Red Sea, to which it gave its name. It was a fortified port in the time of Solomon; revolted against Joram; was retaken by Azariah; and was eventually conquered by Rezuil, and held by the Syrians till it became a Roman frontier town. Under the Mohammedan rule it rose for a while to some importance, but has now sunk into insignificance.

Elba. An island belonging to the kingdom of Italy, in the Mediterranean Sea, between Corsica and the coast of Tuscany, from the latter of which it is separated by a channel 5 miles in breadth. Elba has been rendered famous in history from having been Napoleon's place of exile from May, 1814, till February, 1815.

El Bodén. A mountain-range, near Ciudad Rodrigo, in Spain, where the British troops distinguished themselves against an overwhelming French force in 1811.

Elbow-gauntlet. An ancient piece of armor, a gauntlet of plate reaching to the elbow, adopted from the Asiatics in the 16th century.

Elbow-piece. An ancient piece of armor, a metal plate used to cover the junction of the rere-brace and rant-brace, by which the upper and lower half of the arm were covered.

Elchingen. A village of Bavaria, on the Danube, 7 miles northeast from Ulm. Here the Austrians were defeated by the French in 1805. For this victory Marshal Ney received the title of Duke of Elchingen.

Electric light. An intense light produced by passing an electric current between points of carbon forming electrodes of the circuit. There are many forms of the apparatus. It will be extensively used in future wars for lighting harbor channels, approaches to forts, etc.

Elements. In a military sense, signify the first principles of tactics, fortification, and gunnery.

Elephant. See **PACK AND DRAUGHT ANIMALS.**

Elevate, To. Is to raise the muzzle of the cannon or rifle so that the latter shall be directed at a point above that which it is intended shall be struck.

Elevating Arc. In gunnery, is an arc attached to the base of the breech parallel to the ratchets and graduated into degrees and parts of a degree. A pointer attached to the *fulcrum* points to the zero of the scale when the axis of the piece is horizontal. Elevations and depressions are indicated by the scale. Besides the graduations on the arc, the ranges (in yards) and charges for shot and shell are given.

Elevating Bar. An iron bar used in elevating guns or mortars having ratchets at the breech.

Elevating Screw. The screw by means of which the breech of a cannon is raised, the result being to depress the muzzle.

Elevating Sight. See **SIGHT, ELEVATING.**

Elevation. In gunnery, is one of the elements of pointing, being the movement of the axis of a piece in a vertical plane as distinguished from *direction* or its movement horizontally. The elevation is usually positive,—that is, the gun is pointed above the horizontal. When it is pointed below, it is said to be depressed. The word is also used to express degree, or as a synonym for *angle of elevation*. The sights or elevating apparatus of guns are graduated on the theory that the object is in the horizontal plane of the piece, or that the line of sight is horizontal, which is not always the case in practice. When the elevation is determined by sights the angle of elevation is the angle between the line of sight and the axis of the piece, when these lines are in the same vertical plane,—or the angle between the line of sight and a plane containing the axis of the piece and a horizontal line intersecting it at right angles, when they are not. The graduations of tangent scales and fixed breech-sights give this angle in degrees. The graduation of the pendulum hausse gives the angle correctly only when the line of sight is horizontal. When the elevation is given by elevating arcs or gunner's quadrant, the angle of elevation becomes the angle of fire, or the angle which the axis of the piece makes with the horizontal. Elevation is necessary to overcome the effect of gravity on the projectile. The degree of elevation increases with the range. *In vacuo* the elevation corresponding to the maximum range is 45°. In the air the angle of maximum range diminishes with the velocity and increases with diameter and density of the ball. It is greater in mortars than in howitzers, and greater in howitzers than in guns. In mortars it approximates to 42°; in guns it is about 37°.

Ellisburgh. A village of Jefferson Co., N. Y. In 1814 an engagement took place here between the Americans and British, in which the latter were defeated.

Elmina. A fortified town and seaport of West Africa, founded by the Portuguese in 1481; was the first European settlement planted on the coast of Guinea. It was taken by the Dutch in 1687, and was ceded

by them to Portugal. It was burned by the British troops in 1878.

Elsass (Fr. *Alsace*). One of the old German provinces, having the Rhine on the east and the Vosges Mountains on the west. It was ceded to France in 1648; but after the Franco-German war was annexed by Prussia, under treaty of May 10, 1871.

Elswick Compressor. An arrangement for compressing friction plates used in the English navy to take up the recoil of gun-carriages upon their slides. The 7 friction plates arranged longitudinally under the carriage and attached to its lower part, have alternating between them 6 long flat bars attached at their ends to the slide by bolts passing through them, but allowing them a side motion. The plates and bars are tightly clamped by short rocking levers, the lower ends of which act on the outside plates. The levers are worked by collars on a threaded shaft, which catch their upper ends. The shaft is called the compressor shaft, and has a handle or crank on the outside of each cheek or bracket,—one is called the *adjusting lever*, the other the *compressor lever*. The first is used to give an initial compression to suit the charge, the other is operated by the recoil being forced down by a tripper on the slide. Two forms of the compressor are used,—one for the *single plate*, the other for the *double-plate carriage*. In the double-plate carriage the adjusting lever can be set to any degree of compression without causing any motion in the compressor shaft or lever.

Elswick Gun. Armstrong gun (which see).

Elvas. A strong frontier town of Portugal, in the province of Alemtejo, situated on a rocky hill, 10 miles northwest from Badajoz. It is one of the most important strongholds in Europe. The arsenal and bomb-proof barracks are capable of containing 8000 or 7000 men. In 1808 it was taken and held for five months by the French.

Emaum Ghaur. In Scinde, was a strong fortress in the Thur or Great Sandy Desert, separating that province from the rajpoot state of Jessulmere. It was captured by Sir Charles Napier in January, 1848.

Embark. To put or cause to go on board a vessel or boat; as, to embark troops. To go on board of a ship, boat, or vessel; as, the troops embarked for Egypt.

Embarkation. The act of putting or going on board of a vessel.

Embaterion. A war-song of the Spartans, accompanied by flutes, which they sung marching in time, and rushing on the enemy. The origin of the embaterion is lost in antiquity.

Embattle. To arrange in order of battle; to draw up in array, as troops for battle; also, to prepare or arm for battle.

Embattle. To furnish with battlements. "*Embattled*" house.

Embattlement. An indented parapet; battlement.

Embezzlement. See APPENDIX, ARTICLES OF WAR, 60.

Emblazonry. See BLAZONRY.

Emblee (Fr.). A prompt, sudden, and vigorous attack, which is made against the covert way and outworks of a fortified place.

Embody. To form or collect into a body or united mass; as, to embody troops.

Embrasseur (Fr.). A piece of iron, which grasps the trunnions of a piece of ordnance, when it is raised upon the boring machine, to widen its caliber.

Embrasure. In fortification, is an opening in the parapet, or a hole in the mask wall of a casemate through which the guns are pointed. The sole or bottom of the embrasure is from 2½ to 4 feet (according to the size of the gun) above the platform upon which the gun stands. Parapet embrasures are smallest at the interior opening, which is called the mouth, and is from 1½ to 2 feet wide. The widening of the embrasure is what is called the *splay*. The sole slopes downward about one in six. Its exterior line, or its intersection with the exterior slope, is usually made half the length of the sole. The line which bisects the sole is called the *directrix*. The sides are called cheeks. The masses of earth between embrasures are called *merlons*. When the directrix makes an angle with the direction of the parapet, the embrasure is *oblique*. The embrasures of casemates have in horizontal section a shape something like an hour-glass. The nearest part is called the throat. This is sometimes closed with iron shutters.

Emboucher. A vulgar term used among French soldiers to signify the act of running a man through the body; literally *to spit him*.

Emery. A powder made by grinding a mineral,—corundum,—used by soldiers for cleaning their arms.

Eminence. A high or rising ground, which overlooks and commands the low places about it. Such places, within cannon-shot of any fortified place, are a great disadvantage, if the besiegers become masters of them.

Emir, or Emeer. An Arabic word, equivalent to "ruler," is a title given to all independent chieftains, and also to all the actual or supposed descendants of Mohammed through his daughter Fatima. In former times, the title of Emir was borne by the leaders in the religious wars of the Mohammedans, and by several ruling families.

Emissary. A person sent by any power that is at war with another, for the purpose of creating disaffection among the people of the latter.

Emousser (Fr.). To blunt, to dull. In a military sense, it signifies to take off the four corners of a battalion, which has formed a square, and to give it, by those means, an octagon figure; from the different obtuse angles of which it may fire in all directions.

Emperor (*Imperator*). Among the an-

cient Romans, signified the general of an army, who, for some extraordinary success, had been complimented with this appellation. Subsequently it came to denominate an absolute monarch or supreme commander of an empire. In Europe, the first who bore the title was Charlemagne.

Empilement (*Fr.*). From *empiler*, to pile up. The act of disposing shot and shell in the most secure and convenient manner. This generally occurs in arsenals and citadels.

Emprise. A hazardous attempt upon the enemy.

Encamp. To form and occupy a camp; to halt on a march, spread tents, and remain for a night or for a longer time; as, an army or company.

Encampment. The pitching of a camp. The act of pitching huts or tents, as by an army, for temporary lodging, or rest; the place where an army or company is encamped. There are *intrenched* camps, where an army is intended to be kept some time, protected against the enemy; *flying* camps, for brief occupation; camps of *position*, bearing relation to the strategy of the commander; and camps of *instruction*, to habituate the troops to the duties and fatigues of war.

Enceinte. In fortification, denotes generally the whole area of a fortified place. Properly, however, it means a cincture or girdle, and in this sense the *enceinte* signifies the principal wall or rampart encircling the place, comprising the curtain and bastions, and having the main ditch immediately outside it.

Encircle. To pass around, as in a circle; to go or come round; as, the army encircled the city.

Encombrer (*Fr.*). In fortification, to fill up any hollow place, such as a stagnant lake, etc., with rubbish.

Encompass. To describe a circle about; to go around; to encircle; to inclose; to environ; as, an army encompasses a city; a ship's voyage encompasses the world.

Encounter. A meeting with hostile purpose; hence, a combat; a battle.

Encounter. To come against face to face; to engage in conflict with; to oppose; as, two armies encounter each other.

Encounters. In military affairs, are combats or fights between two persons only. Figuratively, battles or attacks by small or large armies.

Encroachments. The advancement of the troops of one nation on the rights or limits of another.

Enemy. In military language, the opposing force; as, "We have met the enemy, and they are ours."

Enfans Perdus. Forlorn hope, in military history, are soldiers detached from several regiments, or otherwise appointed to give the first onset in battle, or in an attack upon the counterscarp, or the breach of a place besieged; so called (by the French) because of the imminent danger to which they are exposed.

Enfield Rifle-musket. The service arm of Great Britain prior to the adoption of breech-loaders; manufactured at Enfield, England, at the royal small-arms factories. It was first extensively introduced in 1853, and was used during the Crimean war. It had three grooves, with a twist of about one turn in 6 feet. Before the adoption of the Martini-Henry, large numbers of those guns were utilized by converting them into breech-loaders on the Snider principle. The Enfield rifles, though very serviceable weapons, much better than the Belgian and Austrian arms imported to the United States during the civil war, were in almost every respect inferior to the old Springfield (U. S.) rifle-musket, nearly of the same caliber (.58), the Enfield being .577. All those weapons have now given place to various breech-loading arms.

Enfilade. Is to fire in the direction of the length of a line of parapet or troops; to "rake it," as the sailors say. In the siege of a fortress, the trenches of approach are cut in a zigzag, to prevent the defenders enfilading them from the walls.

Enfilading Batteries. In siege operations are one of the classes of batteries employed, the other classes being *counter* and *breaching* batteries. Enfilading batteries are located on the prolongation of the faces and flanks of the works besieged, to secure a raking fire along the terre-pleins.

Engage. To gain for service; to enlist.

Engage. To enter into conflict; to join battle; as, the armies engaged in a general battle.

Engagement. A general action or battle, whether by land or sea.

Engarrison. To protect any place by a garrison.

Engen. In Baden; here Moreau defeated the Austrians, May 8, 1800.

Enghien, or Steenkirk. In Southwestern Belgium. Here the British under William III. were defeated by the French under Marshal Luxembourg, July 24, 1692.

Engineer, Military. An officer in the service of a government, whose duties are principally to construct fortifications, to make surveys for warlike purposes, to facilitate the passage of an army by the construction of roads and bridges; in short, to execute all engineering works of a military nature. He is also called upon to undertake many works which more properly belong to the business of a civil engineer, such as the survey of the country, the inspection of public works, and, in short, all the duties of a government engineer.

Engineering. The business of the engineer; the art of designing and superintending the execution of railways, bridges, canals, harbors, docks, the defense of fortresses, etc.

Engineer Corps. In modern nations, the necessity for a corps of staff-officers, trained to arrange for and overcome the embarrassments of the movements of an army in the

field, has been thoroughly demonstrated, and hence, in European armies, a trained staff of officers is organized for this purpose. In the United States a force of about 800 officers and enlisted men are engaged in these duties. See **SAPPERS AND MINERS**.

Engineers, Topographical. See **TOPOGRAPHICAL ENGINEERS**.

England. The southern and larger division of the island of Great Britain, and the principal member of the United Kingdom of Great Britain and Ireland. It was so named, it is said, by Egbert, first king of the English, in a general council held at Winchester, 829. It was united with Wales, 1283; with Scotland in 1603; and Ireland was incorporated with them, January 1, 1801. For previous history, see **BRITAIN**; and for further details of battles, etc., see separate articles.

Enlargement. The act of going or being allowed to go beyond the prescribed limits; as the extending the boundaries of an arrest, when the officer is said to be enlarged, or under arrest at large.

Enlargement. Enlargements of the bore and vent are injuries suffered by all cannon that are much used. The term is technically applied to certain injuries to brass cannon. See **INJURIES TO CANNON**.

Enlistment. The voluntary enrollment of men in the military or naval service.

Enniscorthy. A town of Ireland, in the county of Wexford, on the river Slaney. It arose in the Norman castle, still entire, founded by Raymond le Gros, one of the early Anglo-Norman invaders. Cromwell took this place in 1649; and the Irish rebels stormed and burned it in 1798.

Enniskillen. A town of Ireland, in the county of Fermanagh. This place is famous for the victory, in 1689, won by the troops of William III., under Lord Hamilton, over a superior force of James II., under Lord Gilmoy. The banners taken in the battle of the Boyne hang in the town-hall of Enniskillen.

Enniskillen Dragoons. A British regiment of horse; it was first instituted from the brave defenders of Enniskillen, in 1689.

Enrank. To place in ranks or in order.

Enroll. To place a man's name on the roll or nominal list of a body of soldiers.

Ensonce. To cover as with a fort.

Enseigne (Fr.). The colors. The French designate all warlike symbols under the term *enseigne*; but they again distinguish that word by the appellations of *drapeaux*, colors, and *etendards*, standards. *Drapeaux* of colors are particularly characteristic of the infantry; *etendards* or standards belong to the cavalry.

Ensemble. Together; the exact execution of the same movements, performed in the same manner, and by the same motions. It is the union of all the men who compose a battalion, or several battalions or companies of infantry and cavalry, who are to act as if put in motion by the same spring.

Enshield. To cover from the enemy.

Ensiform. Having the shape of a sword.

Ensign-bearer. One who carries a flag; an ensign.

Ensigny. The rank or office of an ensign.

Ensisheim. In Eastern France; here Turenne defeated the imperial army, and expelled it from Alsace, October 4, 1674.

Entanglement. Abatis, so called, when made by cutting only partly through the trunks, and pulling the upper parts to the ground, where they are picketed.

Entanglement, Wire. Formed by twisting wire round stout stakes or trees 7 feet apart. The wires are placed about a foot or 18 inches above the ground. The trees-pickets or trees are in two or three rows, arranged checkerwise, the wires crossing diagonally.

Enter, To. To engage in; to enlist in; as, to enter an army.

Enterprise. An undertaking attended with some hazard and danger.

Enterpriser. An officer who undertakes or engages in any important and hazardous design.

Entire, or Rank Entire. A line of men in one continued row by the side of each other. When behind each other, they are said to be in file.

Entonnoir (Fr.). The cavity or hole which remains after the explosion of a mine. It likewise meant the tin case or port-feu which is used to convey the priming powder into the vent of a cannon.

Entrench, To. Is to construct hastily thrown-up field-works for the purpose of strengthening a force in position. See **INTRENCH**.

Entrepôts. Magazines and places appropriated in garrison towns for the reception of stores, etc.

Envelope. In fortification, a work of earth, sometimes in the form of a single parapet, and at others like a small rampart; it is raised sometimes in the ditch, and sometimes beyond it. Envelopes are occasionally *en zigzag*, to inclose a weak ground, where that is practicable, with single lines. Envelopes, in a ditch, are sometimes called *sillons*, *contresgardes*, *conserves*, *lunettes*, etc.

Environ, To. To surround in a hostile manner; to hem in; to besiege.

Enzersdorf. A fortified town of Austria, 8 miles east from Vienna.

Epaule. In fortification, denotes the shoulder of a bastion, or the place where its face and flank meet and form the angle, called the angle of the shoulder.

Epaulement (Fr. *epaule*). In siege works, is a portion of a battery or earthwork. The siege batteries are generally shielded at one end at least by epaulements, forming an obtuse angle with the main line of the battery. The name is often given erroneously to the parapet of the battery itself, but it applies properly to the flanking return

only. Sometimes the whole of a small or secondary earthwork, including the battery and its flanks, is called an epaulement; and sometimes the same name is given to an isolated breastwork intended to shield the cavalry employed in defending a body of besiegers.

Epaulette. A shoulder-knot worn by commissioned officers of the army and navy, as a mark of distinction. The insignia of their rank are usually marked on officers' epaulettes.

Epaulettes. Furnished with epaulettes.

Ephebi. In Grecian antiquity, the name given to the Attic youth from the age of 18, till they entered upon their 20th year. During this period they served a sort of apprenticeship in arms, and were frequently sent, under the name of *peripoli*, to some of the frontier towns of Attica to keep watch against foreign invasion.

Epibatæ. In Grecian antiquity, the name given to soldiers whose duty it was to fight on board ship. They corresponded almost exactly to the marines of modern naval warfare. The term is sometimes found in Roman authors to denote the same class of soldiers, but the general phrase adopted by them is *milites classarii*, or *socii navales*.

Epignare (Fr.). A small piece of ordnance which does not exceed one pound in caliber.

Epigoni. A term which signifies "heirs" or "descendants." It was applied to the sons of the seven chiefs who conducted an expedition against Thebes to restore Polynices, and who were all killed except Adrastus. Ten years later the Epigoni—namely, Alcmaeon, Thersander, Diomedes, Egialeus, Promachus, Sthenelus, and Euryalus—renewed the enterprise and took Thebes. The war of the Epigoni was celebrated by several ancient epic and dramatic poems.

Epinglette (Fr.). An iron needle with which the cartridge of any large piece of ordnance is pierced before it is primed.

Epinikian. Pertaining to, or celebrating, victory; as an epinikian ode.

Epirus. A celebrated country of ancient Greece, lying between the Ionian Sea and the chain of Pindus.

E Pluribus Unum. "One out of many." A motto adopted by the United States since their declaration of independence, in 1776.

Epouvante (Fr.). A sudden panic with which troops are seized, and under which they retreat without any actual necessity for so doing.

Eprouvette (Fr.). A small mortar to prove the strength of gunpowder. There are different sorts of eprouvettes, according to the fancy of different nations who use them. Some raise a weight, and others throw a shot, to certain heights and distances. As a test of gunpowder the eprouvette is comparatively worthless, and it has been generally superseded by instruments for measuring the initial velocity obtained by firing the powder in the particular gun for which it is intended.

A short mortar is, however, still used, to a certain extent, for testing the power of modern blasting powders, such as the mixtures of nitro-glycerine. A very small charge and a heavy shot of chilled iron which enters two or three inches only into the mortar are used. The square roots of the ranges (other things being equal) give the relative powers of the different powders, nearly.

Equalize. To render the distribution of any number of men equal as to the component parts. To *equalize a battalion*, to tell off a certain number of companies in such a manner that the several component parts shall consist of the same number of men.

Equation of Time. See TIME, MEAN SOLAR TIME.

Equerry. Any person who is appointed to attend the sovereign, or prince of the royal blood, upon out-door excursions, and who has the care and management of their horses.

Eques Auratus. A heraldic term for a knight.

Equestrian. A man who rides on horseback; a horseman; a rider.

Equestrian Order. Among the Romans, signified their knights or equites; as, also, their troopers or horsemen in the field.

Equip, To. To furnish an individual, a corps, or an army with everything that is requisite for military service, such as arms, accoutrements, uniforms, etc.

Equipage. In military matters, is the name given to the necessities of the soldier. The equipment of a private is often used as a name for the whole of his clothes, arms, and accoutrements, collectively. The equipage of the camp is of two kinds, *camp* and *field* equipage.

Equipments, Cannoneers'. Include the *hausse pouch*, *cartridge pouches*, *primer pouches*, and *thumb-stall*, used in the field service. The equipments for a field-piece are the *tampion* and *strap*, *vent cover* and *tarpaulin*. Other things used in service of cannon are called *implements*, which see.

Equipments, Horse. In the mounted service, comprise the *bridle*, *halter*, *watering bridle*, *saddle*, *saddle-bags*, *saddle blanket*, *nose-bag*, *lariat*, *curry-comb*, *brush*, etc.

Equipments, Infantry. Comprise the personal outfit of the soldier, excluding arms proper and clothing. A set of equipments is called a *kit* (which see). The standard equipments for infantry include the *knapsack*, *belts*, and *plates*, *cartridge-box*, *hoyonet-scabbard*, *haversack*, and *canteen*. The knapsack, haversack, and canteen are only used in marching. In the United States there is a strong tendency towards discarding the knapsack; a roll made of the blanket, piece of shelter-tent, or overcoat, being frequently used instead. A clothing-bag is also sometimes used to take its place. The best manner of arranging and slinging the various articles carried, for the comfort and health of the soldier, is still an open question. In future wars it is probable that an intrenching tool will be added to the soldier's equip-

ment. The equipments for a cavalry soldier in the United States are very much the same as for infantry.

Equipments, Signal. The *flags, staffs, flying torches, fort torches, flame shades, haversacks, telescopes, etc.*, used in signaling. A set of equipments for one man is called a *signal kit*.

Equites. An order of equestrian knights introduced among the Romans by Romulus.

Eretria. One of the most celebrated of ancient cities, and, next to Chalcis, one of the most powerful in Eubœa. After the Peloponnesian war, the city was governed by tyrants.

Erfurt. A town of Prussian Saxony, on the river Gera; it was founded in 476. Erfurt was ceded to Prussia in 1802. It capitulated to Murat, when 14,000 troops surrendered, October 16, 1806. In this city Napoleon and Alexander met, and offered peace to England, September 27, 1808. The French retreated from Leipzig to Erfurt, October 18, 1813. This place was restored to Prussia by the Congress of Vienna.

Eriçius. In Roman antiquity, a military engine, so named from its resemblance to a hedge-hog. It was a kind of *chevaux-de-frise*, placed as a defense at the gate of the camp.

Erie, Fort. A strong fortification in Upper Canada, on the northern shore of Lake Erie. Here the British were defeated by the Americans, August 15, 1814.

Erlau. A fortified town of Hungary, the old castle of which was frequently besieged during the Turkish wars, both by Moslem and Christian.

Eryx. A city and mountain in the west of Sicily, 6 miles from Drepana, and a short distance from the sea-shore. The possession of the town of Eryx was contested by the Syracusans and Carthaginians. A great battle was fought off the town between the fleets of the two nations, in which the Syracusans were victorious. The town subsequently changed hands more than once, but it seems to have owned the Carthaginian supremacy at the time of the expedition of Pyrrhus, 278 B.C. Though taken by that monarch, it once more fell into the hands of its original conquerors, who retained it till the close of the first Punic war.

Erzroom, Erzroum, or Erzurum. A fortified town of Armenia (Asiatic Turkey), on the river Kara-Soo, a branch of the Euphrates. Its position renders it an important military post. In 1210 it was taken by the Seljooks, who are said to have destroyed here 100 churches; taken by the Ottoman Turks in 1517. It was taken by the Russians in 1829, but was restored to Turkey in the following year.

Escadron (Fr.). Squadron. Froissart was the first French writer who made use of the word *escadron* to signify a troop of horse drawn out in order of battle. The term *escadron* is more ancient than the word *battalion*.

Escalade. From the Latin *scala*, a ladder. In siege operations, a mode of gaining admission within the enemy's works. It consists in advancing over the glacis and the covert way, descending, if necessary, into the ditch by means of ladders, and ascending to the parapet of the curtain and bastions, and are either procured on the spot, or are sent out with the siege army. The leaders constitute a forlorn hope.

Escale (Fr.). A machine used to ply the petard.

Escape of Gas. See GAS-CHECK and BREACH MECHANISM.

Escarp. In fortification, the surface of the ditch next the rampart, the surface next the enemy being termed the counterscarp. Called also *scarp*.

Escarp Galleries. Galleries constructed in the escarp for the purpose of flanking the ditch caponnière.

Escarpment. Ground cut away nearly vertically about a position, in order to render it inaccessible to the enemy.

Escort. A body of troops attending an individual as a guard. The term is also applied to a guard placed over prisoners on a march, to prevent their escape, and to the guard of a convoy of stores.

Escort, Funeral. See FUNERAL ESCORT.

Escort of Honor. A body of troops attending a personage of rank by way of military compliment.

Escort of the Color. The military ceremony of sending for and receiving the colors of a battalion.

Escouade (Fr.). In the old French service generally meant the third part of a company of foot or a detachment. Companies were divided in this manner for the purpose of more conveniently keeping the tour of duty among the men. We have corrupted the term, and called it *squad*.

Escuage. An ancient feudal tenure by which the tenant was bound to follow his lord to war or to defend his castle.

Espadon. In old military works, a kind of two-handed sword, having two edges, of a great length and breadth; formerly used by the Spanish.

Espauliere (Fr.). A defense for the shoulder, composed of flexible, overlapping plates of metal, used in the 15th century; the origin of the modern *epaulette*.

Espiere. A town of Belgium, 8 miles from Courtrai, where the allied Austrian and English army defeated the French, May 22, 1794.

Espingard, or Epingare (Fr.). An ancient name for a small gun under a 1-pounder. They were used as early as the 14th century.

Espingole, or Spingole (Fr.). A blunderbuss; a kind of blunderbuss which, in early times, was loaded with several balls; the charges were separated from each other by tampions in which a hole was made, and thus the balls were fired in succession.

Espinosa de la Monteros. A town of

Spain, on the Trueba, 50 miles from Burgos. The French defeated the Spaniards here in 1808.

Esplanade. In fortification, is the open space intentionally left between the houses of a city and the glacis of its citadel, so that the enemy may not be able to erect breaching batteries under cover of the houses. In old works on fortification, the term is often applied to the glacis of the counterscarp, or the slope of the parapet of the covered way towards the country.

Esponton (Fr.). A sort of half pike, about 8 feet in length, used in the 17th century. The colonels of corps as well as the captains of companies always used them in action. This weapon was also used by officers in the British army.

Espringal. In the ancient art of war, a machine for throwing large darts, generally called *muchetta*.

Esprit de Corps (Fr.). This term is generally used among all military men in Europe. It may not improperly be defined a laudable spirit of ambition which produces a peculiar attachment to any particular corps, company, or service. Officers without descending to mean and pitiful sensations of selfish envy, under the influence of a true *esprit de corps* rise into an emulous thirst after military glory. The good are excited to peculiar feats of valor by the sentiments it engenders, and the bad are deterred from ever hazarding a disgraceful action by a secret consciousness of the duties it prescribes.

Esquimaux. The tribes inhabiting Greenland and Arctic America. Those inhabiting the continent are found in sparse settlements from Behring Strait to Labrador. They are generally peaceable. Some of these in Greenland have been civilized by the influence of the Danes.

Esquire. In chivalry, was the shield-bearer or armor-bearer to the knight. He was a candidate for the honor of knighthood, and thus stood to the knight in the relation of a novice or apprentice. When fully equipped each knight was attended by two esquires.

Essedarii. In Roman antiquity, gladiators who fought in a heavy kind of chariot called *essedra* or *essedum*. The *essedra* (which derived its name from the Celtic word *ess*, signifying a carriage) was a ponderous kind of chariot much used in war by the Gauls, the Belgæ, and the Britons. It differed from the *currus* in being open before instead of behind; and in this way the owner was enabled to run along the pole, from the extremity of which, or even from the top of the yoke, he discharged his missiles with surprising dexterity.

Essek, or Eszek. A town and fortress of the Austrian empire, in Sclavonia, on the Drave. It contains an arsenal, barracks, and other military buildings. There were several battles fought here between the Turks and Germans. It was finally taken from

the Turks in 1687, since which time it has continued in the hands of the house of Austria.

Essling. A village of Lower Austria, on the left bank of the Danube, 6 miles east of Vienna. Between this village and that of Aspern the French were repulsed by the Austrians in a severe engagement in 1809. See **ASPERN**.

Establish. A technical phrase to express the quartering of any considerable body of troops in a country. Thus it is common to say, the army took up a position in the neighborhood of —, and established the headquarters at —.

Establishment. The quota of officers and men in an army, regiment, troop, or company.

Establishment, Peace. Is the reduced condition of an army suited to a time of peace.

Establishment, War. Is the augmentation of regiments to a certain number, by which the whole army of a country is considerably increased, to meet war exigencies.

Estacade (Fr.). A dike constructed of piles in the sea, a river, or a morass, to check the approach of an enemy.

Estafette (Fr.). A military courier, sent express from one part of an army to another.

Estonia, or Revel. A Russian province, said to have been conquered by the Teutonic knights in the 12th century; after various changes it was ceded to Sweden by the treaty of Oliva in 1660, and finally to Russia by the peace of Nystadt in 1721, having been conquered by Peter in 1710.

Estimates. Army estimates are the computation of expenses to be incurred in the support of an army for a given time.

Estimating Distances. See **POINTING**.

Estoc (Ital.). A small dagger worn at the girdle, called in Elizabethan times a *tucks*.

Etoile. See **ETOILES**.

Estradiots, or Stradiots. Grecian and Albanian horsemen, some of whom were employed in the Italian wars by Charles VIII.; their favorite weapon was the zagaye; besides this they had a broadsword, and club slung on the bow of the saddle, with sleeves and gauntlets of mail.

Estramacon (Fr.). A sort of two-edged sword formerly used. A blow with the edge of a sword.

Etat Major (Fr.). The staff of an army, including all officers above the rank of colonel; also, all adjutants, inspectors, quartermasters, commissaries, engineers, ordnance officers, paymasters, physicians, signal-officers, judge-advocates; also, the non-commissioned assistants of the above officers.

Etoiles (Fr.). Small redoubts which are constructed by means of angles reentrant and angles sortant, and have from 5 to 8 salient points. This species of fortification has fallen into disuse, and are superseded by square redoubts, which are sooner built and are applicable to the same purpose of defense.

Etoupile (*Fr.*). An inflammable match, composed of three threads of very fine cotton, which is well steeped in brandy mixed with the best priming gunpowder.

Etruria, or **Tuscia** (hence the modern name *Tuscany*). A province of Italy, whence the Romans, in a great measure, derived their laws, customs, and superstitions. The subjugation of this country forms an important part of early Roman history. A truce between the Romans and Etrurians for forty years was concluded in 361 B.C. The latter and their allies were defeated at the Vadimonian Lake, 310 B.C.; with the Boii their allies, 323 B.C., and totally lost their independence about 285 B.C.

Eubœa. The largest island in the *Ægean* Sea. Two of its cities, Chalcis and Eretria, were very important, till the former was subdued by Athens, 506 B.C., and the latter by the Persians, 490. After the Persian war Eubœa became wholly subject to Athens. It revolted in 445, but was soon subdued by Pericles. After the battle of Chæronea, 338, it became subject to Macedon. It was made independent by the Romans in 194, but was afterwards incorporated in the province of Achaia. It now forms part of the kingdom of Greece.

Eupatoria, or **Koslov**. A town of Russia, on the west coast of the Crimea. In September, 1854, the allied English and French armies landed near here, and the town soon after was occupied by a small detachment. The Turks subsequently occupied it, and in 1855 it was attacked by the Russians, who, however, were repulsed by the Turks, and the Anglo-French ships of war, lying in the neighboring roadstead.

Eureka Projectile. See **PROJECTILE**.

Europe. The least extensive, but most civilized of the five great divisions of the globe. It is bounded by the sea in all directions, except the east, where it is separated from Asia by a boundary-line, formed by the river Kara, the Ural Mountains and River, and the Caspian Sea. For military and naval events which occurred in Europe, see separate articles.

Eurymedon (now *Kapri-Su*). A small river in Pamphylia, celebrated for the victory which Cimon gained over the Persians on its banks, 469 B.C.

Eustace, St. In Lower Canada; the rebels were defeated here, December 14, 1837, and compelled to surrender their arms. Their chiefs fled.

Eustatius, St. A West India island, which was settled by the Dutch in 1632; taken by the French in 1689; by the English in 1690; again by the British forces under Rodney and Vaughan, February 8, 1781. It was recovered by the French, November 26, same year. It was again captured by the British in 1801 and 1810, and restored to the Dutch in 1814.

Eutaw Springs. A small affluent of the Santee River, in South Carolina. On its banks was fought, September 8, 1781, the

battle of this name. Gen. Greene, determining to dispossess the British of their remaining posts, with about 2000 men attacked their forces under Col. Stuart. The British were routed and fled; but finding in their flight some objects affording shelter, rallied and repulsed their assailants, and Gen. Greene finding it impossible to dislodge them, retreated to his camp with 500 prisoners. The British loss was about 1000; the American about 600.

Euxine Sea. See **BLACK SEA**.

Evacuate. To withdraw from a town or fortress, in consequence either of a treaty or a capitulation, or of superior orders.

Evagination. An unsheathing or drawing out of a sheath or scabbard.

Evesham. A borough and market town of England, in Worcestershire, on the Avon. Near this place a battle was fought between Prince Edward, son of Henry III., and Simon de Montfort, earl of Leicester, August 4, 1265.

Evidence. Is that which makes clear, demonstrates, or ascertains the truth of the very fact or point in issue. Hearsay evidence, the declaration of what one has heard from others. This species of evidence is not admissible in courts-martial.

Evocati. Were a class of soldiers among the Romans, who, after having served their full time in the army, entered as volunteers to accompany some favorite general. Hence they were likewise called *emereti* and *beneficiarii*.

Evocation. A religious ceremony which was observed among the Romans at the commencement of a siege, wherein they solemnly called upon the gods and goddesses of the place to forsake it and come over to them. When any place surrendered they always took it for granted that their prayer had been heard.

Evolutions. Are the movements of troops in order to change position. The object may be to maintain or sustain a post, to occupy a new post, to improve an attack, or to improve a defense. All such movements as marching, countermarching, changing front, forming line, facing, wheeling, making column or line, deffling, deploying, etc., come under the general heading of evolutions.

Evreux (anc. *Mediolanum*). A city of France, capital of the department of Eure. It has sustained several sieges, and was burned by Henry I. of England in 1119.

Examination, Boards of. See **BOARDS OF EXAMINATION**.

Exarchs. Were appointed by the Byzantine emperors of the East, to govern Central Italy after its conquest by Belisarius and Narses, 548. They ruled from 568 to 752, when Eutychus, the last, was overcome by Astolphus the Lombard.

Exauctoratio. In the Roman military discipline, differed from the *missio*, which was a full discharge, and took place after soldiers had served in the army twenty years;

whereas the *exauctoratio* was only a partial discharge; they lost their pay, indeed, but still kept under their colors or vexilla, though not under the aquila or eagle, which was the standard of the legion; whence instead of *legionarii*, they were called *subsignarii*, and were retained till they had either served their full time, or had lands assigned them. The *exauctoratio* took place after they had served seventeen years.

Excavation. The art of cutting or otherwise making hollows in the earth; also the cavity formed.

Exchange. The act of two officers changing regiments, battalions, or batteries. The mutual giving up of an equal number of prisoners by hostile states or armies. In this sort of exchange an officer, according to his rank, is reckoned as equal to a certain number of men or of officers of a lower grade than his own.

Excubiae. In ancient warfare, the watches and guards kept in the day by the Roman soldiers. They differed from the *vigilae*, which were kept in the night.

Execution, Military. Is the pillaging or plundering of a country by the enemy's army. Military execution also means every kind of punishment inflicted in the army by the sentence of a court-martial; which is of various kinds, including putting a soldier to death by shooting him, which is the ordinary punishment of deserters to the enemy, mutineers, etc. This form of death is considered less disgraceful than hanging by the neck.

Exempt. Not subject, not liable to. Men of certain age are exempt from serving in the militia. An *aide-de-camp* and brigade-major are exempt from all regimental duties while serving in those capacities. Officers on courts-martial are sometimes exempt from all other duties until the court is dissolved.

Exercise. The practice of all those motions and actions, together with the whole management of arms, which are essential to the perfection of a soldier, and the rendering him fit for service.

Exercise, Artillery. Is the method of teaching the regiments of artillery the use and practice of all the various machines of war belonging to that particular arm of the service.

Exon. In England, an officer of the Yeomen of the Royal Guard; an exempt.

Exostre (Fr.). Bridge of the *Helepole* or movable tower of the ancients, by which they passed upon a wall during a siege.

Expanding System of Projectiles. See PROJECTILES, RIFLE.

Expedient. A stratagem in warfare.

Expedition. Is an enterprise taken by sea or by land against an enemy, the fortunate termination of which depends on the rapidity and unexpected nature of its movements. It is usually intrusted to a commander of acknowledged talents and experience.

Expense Magazines. Are small powder-

magazines containing ammunition, etc., made up for present use. There is usually one in each bastion.

Experiments. The trials or applications of any kind of military machines in order to ascertain their practical qualities and uses.

Expiration of Service. The termination of a soldier's contract of enlistment.

Explode. To burst with a loud report; to detonate, as gunpowder, or a shell filled with powder or the like material.

Explosion. The sudden enlargement of the volume of a body by its conversion into gas or vapor. (See EXPLOSIVES.) The explosion of powder may be divided into three distinct parts, viz.: ignition, inflammation, and combustion, all of which see under their proper headings.

Explosives. Substances the elements of which under certain conditions suddenly undergo a chemical rearrangement into gases, giving rise to great pressures on surrounding bodies. Modern writers recognize two different kinds of explosions,—*explosions of the 1st order*, or *detonations*, and *explosions of the 2d order*, or *rapid combustions*. Detonating explosions are practically instantaneous. The explosion is supposed to be propagated by a vibration throughout the mass. Ordinary explosions are propagated by inflammation. *Gunpowder*, which may be taken as a type of explosives of the 2d order, burns at a certain rate, depending upon the density. When a charge is fired the inflammation spreads from the point of ignition to all parts of the charge,—each grain is successively enveloped and burned from surface to centre. The *velocity of inflammation* is the greater in proportion to the degree of confinement from the increased tension of the gases. The *velocity of combustion* is the rate at which the solid grains are burned. It is measured by the distance passed over by the burning surface (the line being taken perpendicular to the surface) in the unit of time. Time thus enters into the explosion of gunpowder and gives it its peculiar value as a ballistic agent.

In the *detonating explosives*, the case is very different. These bodies may be supposed to be made up of molecules containing so many atoms of carbon, oxygen, nitrogen, etc., so placed as to be held in a state of equilibrium by their mutual attractions and repulsions, but this equilibrium is unstable; that is to say, each atom has only a very small arc of vibration in which the molecule is stable. If by any cause an atom is forced beyond this limit the equilibrium of the whole mass is destroyed, and the elements instantly rearrange themselves under the influence of the chemical affinities which obtain under the particular conditions of the explosion. This kind of explosion is brought about in various ways,—by percussion, concussion, heat, etc.,—some bodies being susceptible to one mode of firing more than another. The theory which offers the best explanation of the various phenomena

is that the molecular balance is peculiarly susceptible to overturn by certain vibrations. The vibrations given out by the explosion of the fulminates seem to have the widest range in bringing about the detonation of different substances. For this reason the fulminate of mercury is the universal *detonating agent*. Its own susceptibility to explosion by heat, percussion, and the electric spark especially fits it for this work. Wet gun-cotton requires in addition to the fulminate a "primer" of dry gun-cotton.

Explosives, Composition of. *Ordinary explosives* of which gunpowder is the type are *mechanical mixtures* of two essential ingredients,—one a combustible, the other an oxidizing agent. The combustible is usually carbon,—sometimes associated with hydrogen. It may be sulphur or any substance having a great affinity for oxygen. Organic substances containing carbon and hydrogen are frequently used. In the chemical reaction the carbon is oxidized to carbonic acid and the hydrogen to water with the evolution of great heat.

The oxidizing substances ordinarily used are the nitrates and chlorates. Mixtures containing nitrates are the most stable, since the nitrate is comparatively slow to give up its oxygen. The chlorate mixtures are sensitive to friction and percussion, and explode with great quickness. Many of them are unsafe to handle. A new mode of preparing chlorate mixtures has been suggested which avoids this danger. A *combustible liquid* is used, being absorbed in cakes or lumps of potassium or other chlorate.

Detonating explosives are *chemical compounds*. Among them are *chloride* and *iodide of nitrogen*. Both are dangerous, violent explosives of which no practical use has been made.

The *fulminates* are salts of fulminic acid. The *fulminate of mercury* is the one in common use. See FULMINATES.

The *nitro-substitution* compounds form a large class, comprising the most important of the higher explosives. They are all formed by the action of nitric acid on organic substances containing oxygen, carbon, and hydrogen. This action is to replace hydrogen (H) in the organic substance by hyponitric acid (NO_2) (in the acid), equivalent for equivalent. Sulphuric acid is generally mixed with the nitric, though it plays no direct part in the reaction, being used to absorb the water formed and prevent the dilution of the nitric acid.

Nitro-glycerine, the most powerful explosive in common use, is formed by the action of the acids on glycerine. See NITRO-GLYCERINE.

Nitro-starch and *nitro-mannite* are analogous substances, formed by the action of the acids on starch and sugar.

Gun-cotton is produced by the action of the acids on cotton-wool—a form of cellulose. See GUN-COTTON.

There are varieties of all these compounds

produced by the substitution of different numbers of equivalents of hyponitric acid, but the names are specially given to the most highly nitrated forms.

Picric acid, the salts of which form the well-known *picrates*, is made by the action of the acids on carboic acid.

To heighten the effect of the lower forms of nitro-substitution compounds they are usually mixed with an oxidizing agent, such as *nitrate* or *chlorate*, which supplies the deficient oxygen. This is exemplified in Schultz's wood powder (which see), and Reeve's gun felt.

The picrates are similarly treated. Ammonium picrate mixed with nitre forms Abel's *picric powder* (Burgess's powder). This has been used as a bursting charge for shells.

Mixtures of two high explosives have also been used, as in glyoxiline, invented by Prof. Abel, which is gun-cotton saturated with nitro-glycerine.

Explosive effect depends upon three elements,—1st, the volume of the gases produced taken at a standard temperature; 2d, the heat evolved in the chemical reaction; 3d, the time consumed in the development of the gases. Explosive effect is directly proportional to the first two of these elements, and inversely proportional to the third. According to Bertholet, nitro-glycerine gives out twice as much heat and three and a half times as much gas as an equal weight of gunpowder, but this gives no idea of their relative explosive effects, as the element of time in the detonating explosives is so short that it cannot be calculated. So nearly is this element absent that we may consider these explosions as almost perfect Impulsive Forces. To secure *ballistic effect* requires the gradual application of force. When motion is imparted to a body the inertia developed is inversely proportional to the time consumed in imparting it. This resistance to motion becomes enormously great when the detonating explosives are used. For this reason their ballistic effect is small. The force which should give the projectile motion is expended in producing molecular changes in both projectile and gun. The same quality, however, fits them especially for blasting and torpedoes, where shattering effect is desirable.

Express Rifle. A modern sporting rifle of great killing power, used in hunting large or dangerous animals. They were first introduced in England, and have become celebrated in the hands of African travelers and explorers. The principle consists in using large charges of powder and a light bullet, which gives a very high initial velocity and a trajectory practically a right line for 150 or 200 yards, hence the term "Express." To increase the killing power of the bullet it is made of pure lead and has a hollow point. Upon striking game the bullet spreads outwardly, giving a fearful death-wound. Moreover, for specially ugly game

a small explosive cartridge can be dropped into the cavity in the point, making it an explosive bullet. (See BULLETS, EXPRESS.) In England a caliber as large as .57 is used for some Express rifles. In the United States a caliber of .45 or .50 is considered sufficient.

Expugn. To conquer; to take by assault.

Expugnable. Capable of being expugned, forced or conquered.

Expugnation. The act of taking by assault; conquest.

Expugner. One who expugns or conquers.

Extend. A term peculiarly applicable to light infantry movements, when the files are frequently loosened, and the front of the line extended for the purpose of skirmishing. When the divisions of a column are made to occupy a greater space of ground, they are said to extend their front.

Exterior Crest. The crest of the exterior slope of a parapet.

Exterior Form of Cannon. See ORD-NANCE, EXTERIOR FORM.

Exterior Side. In fortification, is the side of the polygon, upon which a front of fortification is formed.

Exterior Slope. In fortification, is the slope given to the outside of a parapet. It is found by experience that earth of common quality will naturally acquire a slope of 45°, even when battered by cannon. This inclination is therefore given to the slope.

External Injuries to Cannon. See INJURIES TO CANNON.

Extortion. Under the modern laws of

war, honorable men no longer permit the use of any violence against prisoners in order to extort information or to punish them for having given false information.

Extrados (Fr.). The exterior surface of a regular arch, used in the construction of powder-magazines.

Extraordinaries of the Army. In the English service, the allowances to troops beyond the gross pay in the pay office, come under this head. Such are the expenses for barracks, marches, encampments, staff, etc.

Extraordinarii. In the ancient Roman army, a select body of men consisting of the third part of the foreign cavalry and a fifth of the infantry. These were carefully separated from the other forces borrowed from the confederate states, in order to prevent any treacherous coalition between them. From among the extraordinarii a more choice body of men were drawn, under the name of *ablecti*. See ABLECTI.

Eylau, or Eilau. Usually called Prussian Eylau, a town in the government of Königsberg, celebrated for the battle fought here between Napoleon and the allies—Russians and Prussians—under Bennigsen, February 8, 1807. The French force amounted to about 80,000, and the allies numbered 58,000, but were superior in artillery. The French claimed the victory, chiefly because the allied forces, unable to recruit their strength, were ordered to retreat from the field on the night of the battle, and to retire upon Königsberg. The loss of the allies is estimated at about 20,000, while that of the French must have been considerably greater.

F.

Face. A term of varied application. In fortification, it is an appellation given to several parts of a fortress, as the *face of the bastion*, which is the two sides, reaching from the flanks to the salient angles. The *prolonged or extended face* is that part of the line of defense which is terminated by the curtain and the angle of the shoulder. Strictly taken, it is the line of defense *rayant*, diminished by the face of the bastion.

Face. In tactics, is the turning of a soldier on his heels as a "right face"; also the word of command for the movement. *To face* is to turn on the heels.

Face of a Piece. In gunnery, is the terminating plane perpendicular to the axis of the bore.

Face of a Place. In fortification, is the front comprehended between the flanked angles of two neighboring bastions, composed

of a curtain, two flanks, and two faces; and is sometimes called the *tenaille of the place*.

Faces of a Square. The sides of a battalion when formed in square.

Fachon. An Anglo-Norman term for a sword or falchion.

Facing. A covering, a plating.

Facings. The movements of soldiers by turning on their heels to the right, left, right-about, left-about, etc. *To put one through one's facings*, is to examine into his elementary knowledge, to test his pretensions.

Facings. Are also the cuffs and collars of a military coat, and are generally of a different color from that of the coat.

Faction. In ancient history, one of the troops or bodies of combatants in the games of the circus, especially of the horse-races.

Faction. A term applied in an ill sense to any party in a state that offers uncom-

promising opposition to the measures of the government, or that endeavors to excite public discontent upon unreasonable grounds.

Faction (*Fr.*). The duty done by a private soldier when he patrols, goes the round, etc., but most especially when he does duty as a sentinel. The French usually say, *entrer en faction*, to come upon duty; *être en faction*, to be upon duty; *sortir de faction*, to come off duty.

Factionnaire (*Fr.*). *Soldat factionnaire*, a soldier that does every species of detail duty. The term *factionnaire* was likewise applicable to the duty done by officers in the old French service.

Faenza (anc. *Faventia*). A town in Central Italy, 19 miles southwest of Ravenna. Faventia is noted in history as the place where Carbo and Norbanus were defeated with great loss by Metellus, the general of Sulla, in 82 B.C.

Fesulse. See **FIESOLE**.

Fag-end. Is the end of any rope. This term is also applied to the end of a rope when it has become untwisted. *To fag out*, to wear out the end of a rope or a piece of canvas.

Fagnano. A village of Italy, 12 miles from Verona. In 1799 a battle was fought here between the Austrians and French.

Fagots. See **FASCINES**.

Fagots. In military history, were men hired to muster by officers whose companies were not complete; by which means they cheated the public of the men's pay, and deprived the country of its regular establishment.

Failure. An unsuccessful attempt; as, the failure of an expedition.

Faint. To lose courage or spirit; to become depressed or despondent.

Faint-hearted. Wanting in courage; depressed by fear, easily discouraged or frightened; cowardly, timorous.

Fairfax, or **Culpeper Court-house**. A village, the capital of Culpeper Co., Va., on the Orange and Alexandria Railroad. This place was an important strategic point during the civil war (1861-65).

Fairfield. A village of Fairfield Co., Conn., situated on Long Island Sound. It was settled in 1659; it was burned in 1779 by order of Gov. Tryon.

Fair Haven. A village of Bristol Co., Mass., on Buzzard's Bay. The town was attacked by the British on September 7, 1788, but they were repulsed without loss.

Fair Oaks. A locality in Henrico Co., Va., on the Richmond and York River Railroad, about 7 miles east of Richmond. Here a severe battle took place between the Federals under Gen. McClellan and the Confederate army under Gen. Johnston, May 31-June 1, 1862, in which the latter were defeated, although the former obtained no decisive results from their success. The Union loss was estimated at 5500; the Confederate was somewhat greater.

Fakir. A word derived from the Arabic

fakhar, and designating a member of an order of mendicants or penitents, chiefly in India and the neighboring countries. They live either separately as hermits or solitary mendicants, or unite in large gangs, carrying arms and a banner, beating drums, and sounding horns, whenever they approach a town or village.

Falarique (*Fr.*) Falarica; combustible darts or arrows of various thicknesses, generally about 8 feet long; close behind the head was lodged the combustible matter by which shipping, etc., was set on fire; it was projected from a bow or catapult.

Falcair (*Fr.*). A soldier who was armed with a falcarius or short crooked sword.

Falchion. A curved sword, or small cimeter.

Falcon. An ancient form of cannon, 7 feet in length, carrying a ball of 4 pounds in weight.

Falconet. A small cannon anciently used, a little exceeding 6 feet in length, and carrying a ball of 2 pounds in weight.

Falczi, **Peace of**. Concluded between Russia and Turkey, July 2, 1711, the Russians giving up Azof and all their possessions on the Black Sea to the Turks. The Russians were saved from imminent destruction by the address of Catharine, the empress. In 1712 the war was renewed, and terminated by the peace of Constantinople, April 16, 1712.

Falerii. A city of ancient Etruria, which was situated west of the Tiber. The inhabitants, who were called Falisci, joined with those of Veii in assisting the Fidenates against the Romans, and were among the most dangerous enemies of Rome. In 241 B.C. the city was destroyed, and a Roman colony was settled in the time of the triumphs.

Falkirk. A town of Scotland, in Stirlingshire. Sir William Wallace was defeated in a battle near Falkirk by Edward I., and here, also, the royal army was defeated by the adherents of the house of Stuart in 1746.

Falkoping. A town of Sweden, near which, in 1838, Margaret, queen of Denmark, defeated Albert, king of Sweden, and took him prisoner.

Fall. The surrender or capture of a place after it has been besieged.

Fall. The rope rove through blocks, used with gins and shears for raising weights, and with the crab for moving them.

Fall. The descent of a body by the attraction of the earth.

Fall Foul, **To**. To attack; to make an assault.

Fall In. A word of command for men to form in ranks, as in parade, line, or division, etc.

Falling Bodies, **Laws of**. When a body falls freely *in vacuo* it is actuated by a force which may be taken as constant, consequently its velocity will be uniformly accelerated. The constant increment to the ve-

locity in one second is called the *acceleration*, and is a measure of the force. (See **FORCE OF GRAVITY**.) The velocity acquired at the end of a certain time will be found by multiplying the force of gravity by the number of seconds. The laws of falling bodies are given by the following equations:

$$\begin{aligned}v &= gt \\v &= \sqrt{2gh} \\h &= \frac{v^2}{2g}\end{aligned}$$

In which v is the velocity acquired, h the height fallen through, g the force of gravity, and t the time in seconds. These laws are approximately true for dense or heavy bodies falling for a few seconds in the atmosphere. For longer periods, v is less than that due to h under the above laws. For full discussion, see **FINAL VELOCITY**.

Falling Branch. That part of the trajectory of a projectile in which it approaches the earth.

Fall Out, To. To quit the rank or file in which you were first posted. Dirty soldiers on a parade are frequently ordered to fall out, and remain in the rear of their companies. The phrase is applicable in a variety of other instances.

Fall Upon, To. To attack abruptly.

Falots (Fr.). Small lanterns fixed upon the end of a stick or pole. Small lamps likewise used, attached in the same manner, for the purpose of carrying them readily about to light a camp, or besieged towns, as occasion may require.

False Alarm. An alarm or apprehension which is either designedly or unintentionally created by noise, report, or signals, without being dangerous.

False Attack. An approach which is made as a feint for the purpose of diverting an enemy from the real object of attack.

False Fires. Lights or fires employed for the purpose of deceiving an enemy. When an army is about to retire from a position during the night false fires are lighted in different parts of the encampment to impose upon the enemy's vigilance.

False Lights. In debarkations under cover of the night, may likewise be used as signals of deception, when it is found expedient to attract the attention of the invaded country towards one part of the coast or territory, whilst a real attack is meditated against another.

False Muster. An incorrect statement of the number of effective soldiers and horses. See **APPENDIX, ARTICLES OF WAR, 14**.

False Return. A willful report of the actual state of a brigade, regiment, troop, or company, by which the commander-in-chief of the war department is deceived as to the effective force of such regiment or company. See **APPENDIX, ARTICLES OF WAR, 8**.

Famagosta, or Famagusta. A seaport town of the island of Cyprus, on the east

coast, built on the ruins of the ancient Arsinoe. In 1571 Famagosta was taken by the Turks, and the town was almost entirely destroyed by an earthquake in 1735.

Fanfare. The French name of a short and lively military air or call, executed on brass instruments.

Fang, To. To pour water into a pump in order to fetch it, when otherwise the boxes do not hold the water left on them.

Fanion (Fr.). A small flag which was sometimes carried at the head of the baggage of a brigade. It was made of serge, and resembled in color the uniform livery of the brigadier, or of the commandant of any particular corps.

Fantassin (Fr.). A foot-soldier. This term is derived from the Italian *fante*, a boy, the light troops in the 14th and 15th centuries being formed of boys who followed the armies and were formed into corps with light arms, hence the origin of the word *infantry*.

Fantee, or Fanti. A maritime country of Guinea, inhabited by a tribe of the same name, who are now under English protection.

Farcy. A horse disease of the absorbents, affecting the skin and its blood-vessels; is of the nature of mange, and allied to glanders.

Farrier. In a general acceptation of the term, any person who shoes horses, or professes to cure their diseases. In a practical military sense, a man appointed to do the duty of farriery in a troop of cavalry. Troop farriers should be under the immediate superintendence and control of a veterinary surgeon. There is one farrier allowed to each troop of cavalry in the U. S. army.

Farrier-Major. A person who was formerly appointed by the colonel of a dragoon regiment to superintend the farriers of troops. He has since been superseded or replaced by a veterinary surgeon.

Fascas. Bundles of rods usually made of birch, but sometimes of elm, with an axe projecting from the middle of them, which were carried before the chief magistrates of ancient Rome, as symbols of their power over life and limb. They were borne by the lictors, at first before the kings; in the time of the republic, before consuls and prætors; and afterwards before the emperors.

Fascine. A long cylindrical fagot of brushwood, used torevet the interior of batteries and embrasures, and for many other purposes of military engineering.

Fascinés, Covering. See **COVERING-FASCINES**.

Fastness. A fast place; a stronghold; a fortress or fort; a place fortified; a castle, etc.

Fatigue. The cause of weariness; labor; toil; as, the fatigues of war.

Fatigue. The labors of military men, distinct from the use of arms.

Fatigue Call. A particular military call, sounded on the bugle or drum, by which

soldiers are called upon to perform fatigue duties.

Fatigue Dress. The working dress of soldiers.

Fatigue Party. A party of soldiers on fatigue.

Faulcon. A small cannon.

Faulx (Fr.). An instrument nearly resembling a scythe. It was often used to defend a breach, or to prevent an enemy from scaling the walls of a fortified place. This weapon was first resorted to with some success, when Louis XIV. besieged Mons. On the surrender of that town, large quantities of faulx, or scythes, were found in the garrison.

Fausse Braye. In fortification, was a parapet constructed at a lower elevation than the main parapet, and between the foot of the parapet and the edge of the ditch. It was used only in permanent fortification, and has long been obsolete.

Fayetteville. A small town, capital of Washington Co., Ark. On April 18, 1863, this place, which was garrisoned by two regiments of Federal troops under Col. Harrison, was attacked by the Confederate general Cabell, with about 2000 men; and after six hours' severe fighting the Confederates were repulsed.

Fayetteville. A town of Cumberland Co., N. C., on the left bank of the Cape Fear River. On April 22, 1861, the arsenal at this place surrendered to the Confederates, and about 35,000 stand of arms, besides some cannon and a considerable quantity of ammunition, fell into their hands. The town was taken by Gen. Sherman in March, 1865.

Fecial. Pertaining to heralds, and the denunciation of war to an enemy; as, fecial war.

Federal States. Are those united by treaty as one state, without giving up self-government,—as in Switzerland or the United States of North America. The Federals were the people of the Northern of the United States of America during the great conflict in 1861–65; their opponents were styled the Confederates.

Fehrbellin. A town of Prussia, 22 miles northwest from Potsdam. The elector of Brandenburg defeated the Swedish army near this town in 1675.

Feint. In military or naval matters, a mock attack or assault, usually made to throw an enemy off his guard against some real design upon his position.

Feint. In fencing, a seeming aim at one part when another is intended to be struck.

Felloes. In artillery, the parts of the wheel which form its circumference. There are generally seven in each wheel.

Feltre (Fr.). A Roman cuirass made of strong woollen cloth.

Fence. Self-defense by the use of the sword; fencing; the art and practice of fencing or sword-play.

Fencer. One who fences; one who teaches or practices the art of fencing with sword or foil.

Fence-roof. A covering of defense.

Fencible. Capable of being defended, or of making or affording defense.

Fencible. A soldier enlisted for the defense of the country, and not liable to be sent abroad.

Fencible Light Dragoons. A body of cavalry raised voluntarily in various counties of England and Scotland in 1794, to serve during the war in any part of Great Britain. This force was disbanded in 1800.

Fencibles. In England, regiments raised for a limited service, and for a definite period. The officers rank with the militia.

Fencing. The art of using skillfully a sword or foil in attack or defense; the art or practice of self-defense with the sword.

Fenian. A name formerly applied among the Celts to bodies of troops somewhat similar to our modern militia. They derived their name from Finn McCumhail, a famous Celtic chief. In modern times the name was assumed by an association formed for the liberation of Ireland, whose principal headquarters was in the United States, but ramifications of which extended through Great Britain, Ireland, and the colonies. In 1866 the Fenians attempted to invade Canada, and succeeded in crossing the frontier; but they were soon dispersed, and their leaders arrested by the U. S. authorities for violation of the neutrality laws. In 1867 there were several demonstrations made by them in England and Ireland, but their leaders were promptly arrested, and after some were executed, and others sentenced to long terms of imprisonment, the movement was crushed.

Fer (Fr.). Iron. Figuratively, this word is used for a sword or dagger; as, *manier le fer*, to wear the sword, to follow the profession of arms.

Fer à Cheval (Fr.). In fortification, a horseshoe, a small round or oval work, with a parapet, generally made in a ditch or in a marsh. It further means, according to the French acceptance of the term, a work constructed for the purpose of covering a gate, by having within it a guard-house, to prevent the town from being taken by surprise.

Ferdwit. In ancient military history, a term formerly used to denote a freedom from serving upon any military expedition; or, according to some, the being acquitted of manslaughter committed in the army.

Fere Champenoise, La. A town of France, in the department of the Marne, 20 miles from Epernay. In 1814 the French were defeated here by the allies.

Fere, La. A fortified town of France, in the department of the Aisne, on an island in the Oise. It has an arsenal and a school of artillery. This town was taken by the Spaniards in 1580; and by the allies in 1814.

Ferentarii. Among the Romans, were auxiliary troops lightly armed; their weapons being a sword, arrows, and a sling.

We have also mention of another sort of Ferentarii, whose business was to carry arms after the army, and to be ready to supply the soldiers therewith in battle.

Ferozeshah. A village in Hindoestan, situated a few miles from the left bank of the river Sutlej. Here the British, commanded by Sir Hugh Gough, attacked the intrenchments of the Sikhs, and carried their first line of works, December 21, 1845; but night coming on, the operations were suspended till daybreak next day, when their second line was stormed by Gen. Gilbert, and 74 guns captured. The Sikhs advanced to retake their guns, but were repulsed with great loss, and retreated toward the Sutlej, December 22; and recrossed that river unmolested, December 27. The loss of the British was reckoned at 2415.

Ferrara. A city of Italy, and the capital of one of the *Æmilian* provinces of the same name. It was subdued by the Lombards in the 8th century, and taken from them by Pepin, about 752, who gave it to Pope Stephen II. About 1208 it fell into the hands of the house of Este, and in 1598 Pope Clement VIII. obtained the sovereignty. The French under Masséna took Ferrara in 1796; but it was restored to the pope in 1814. An Austrian garrison held it from 1849; it retired in June, 1859, and the people rose and declared for annexation to Sardinia, which was accomplished in March, 1860.

Ferrara. A sword of excellent temper, made of steel from Ferrara, Italy. The kind most prized was manufactured by Andrea di Ferrara; hence such a sword was often called an *Andrea-Ferrara*.

Ferries, Rope. See **PONTONS**.

Ferrol. A seaport town of Spain, province of Corunna, and an important naval station. This place was unsuccessfully attacked by the British in August, 1800. Marshal Soult captured Ferrol, January 27, 1809.

Ferry. A water conveyance made use of to cross a river, or branch of the sea.

Fetter. To put fetters upon; to shackle or confine the feet with a chain; to bind; to enchain. Deserters are sometimes fettered while undergoing punishment for the crime of desertion.

Feu-de-joie. A salute fired by musketry on occasions of public rejoicing, so that it should pass from man to man rapidly and steadily, down one rank and up the other, giving one long continuous sound.

Feu Rasant (Fr.). A grazing fire, or a discharge of musketry or cannon, so directed that the balls shall run parallel with the ground they fly over, within 3 or 4 feet of the surface.

Feud. A contention or quarrel; especially an inveterate strife between families, clans, or parties in a state; deadly hatred; contention satisfied only by bloodshed.

Feudal. Consisting of, or founded upon, feuds or fiefs; embracing tenures by military system; as, the feudal system.

Fez. A red cap without a brim, worn by Turkish soldiers and others.

Fez. A city of Morocco, Africa; it was founded by Edris, a descendant of Mohammed, about 787; was long capital of the kingdom of Fez. After long-continued struggles it was annexed to Morocco about 1550.

Fichant. In fortification, said of flanking fire which impinges on the face it defends; that is, of a line of defense where the angle of defense is less than a right angle.

Fidenæ. An ancient city of Latium, on the left bank of the Tiber, 5 miles from Rome. The proximity of the two cities brought them early into collision, and we find that Fidenæ was engaged in successive wars with the early Roman kings. After the expulsion of the Tarquins Fidenæ entered into a league with the Sabines and Latins to effect their restoration, but the attempt proved abortive, and, deserted by their allies, the Fidenates were compelled to surrender to the Roman arms. The city afterwards continued its struggles against Rome, but without success, and, though there is no record of its destruction, it had dwindled into an insignificant village before the close of the Roman republic.

Fidentia (now *Bargo S. Domingo*). A town in Cisalpine Gaul, on the Via *Æmilia*, between Parma and Placentia, memorable for the victory which Sulla's generals gained over Carbo, 82 B.C.

Fief. An estate held of a superior on condition of military service; a fee; a feud.

Field. A cleared space or plain where a battle is fought; also, the battle itself. To *take the field* means to commence active operations against an enemy.

Field. In heraldry, the surface of a shield; hence, any blank space or ground on which figures are drawn or projected.

Field Allowance. In the British service, is an allowance granted to officers in camp at home, or on a campaign, to enable them to repay themselves the expense of purchasing camp equipage, bat-horses, etc. It is divided into ordinary and extraordinary field allowance, the former being granted in time of peace, the latter in that of war.

Field Artillery. That portion of the artillery which is used in the field. In the U. S. army the 8- and 8½-inch rifle guns, Gatling, and 12-pounder smooth-bore, constitute the field artillery. See **ARTILLERY**.

Field-battery. Is a certain number of pieces of artillery so equipped as to be available for attack or defense, and capable of accompanying cavalry or infantry in all their movements in the field. There are allotted to a field-battery 4 pieces in time of peace and 6 in time of war, and it is divided into *mounted artillery*, which usually serves with infantry, and *horse artillery*, which ordinarily serves with cavalry. The main difference between the two consists in the cannoneers of the latter being mounted; in rapid evolutions of the former they are conveyed on the gun-carriages. See **ARTILLERY**.

Field-bed. A folding bed used by officers while on campaigns or in the field.

Field-carriage. Field-gun carriages consist of two short cheeks of wood, bolted upon a stock and wooden axle-body, in a recess which fits the iron axle on which the wheels are placed. The stock terminates in a *trail* and *trail-plate* which rests on the ground, and has on the end a strong ring called the *lunette*, which is placed on the pintle-hook when the piece is limbered. In the stock is placed an elevating screw-box of bronze in which the elevating screw fits. They have also *limbers* (which see).

Field-colors. Small flags of about a foot and a half square, carried along with troops for marking out the ground for the squadrons and battalions; camp-colors.

Field-day. A term used when a regiment is taken out to the field, for the purpose of being instructed in the field exercise and evolutions.

Fielded. Being in the field of battle; encamped. This term is now obsolete.

Field-equipage. Military apparatus for field service.

Field Forge. See **FORGE**.

Field-glass. A binocular telescope, used by officers in field service.

Field-gun. A small kind of gun, or cannon, used on the battle-field; a field-piece.

Field-Marshal (*Mareschal, Feldmarschall, Feldzeugmeister*). The commander of an army; a military officer of high rank in France, Germany, and other nations, and the highest military officer in England. Formerly a captain-general was occasionally appointed, who had rank higher even than a field-marshal.

Field-officer. Is a colonel, lieutenant-colonel, or major of a battalion or regiment, as distinguished from general officers, who are superior to field-officers in rank; from line-officers, who are inferior; and from staff-officers, general or regimental, who may be of rank superior, equivalent, or inferior to that of field-officers.

Field-officer's Court. In the U. S. service, a court-martial consisting of one field-officer empowered to try cases, subject to jurisdiction of garrison and regimental courts, takes the place of the latter courts in time of war, but cannot be held in time of peace.

Field of the Cloth of Gold. A name given to an open plain between Ardres and Guisnes, where Henry VIII. of England had an interview in 1520 with Francis I. of France. The nobility of both kingdoms embraced the opportunity to display their magnificence with the utmost emulation and profusion of expense.

Field-park. The spare carriages, reserved supplies of ammunition, tools, and materials for extensive repairs and for making up ammunition, for the service of an army in the field, form the field-park, to which should be attached also the batteries of reserve.

Field-piece. A small cannon which is carried along with armies, and used in the field of battle.

Field Service. Service performed by troops in the field.

Field-staff. A staff formerly carried by gunners in the field, and holding lighted matches for discharging cannon. It is no longer used.

Field Telegraph. See **TELEGRAPH**, **FIELD**.

Field-train. In the British service, a department of the Royal Artillery, consisting of commissaries and conductors of stores, responsible for the safe custody of the ammunition, for the formation of proper depots of shot, etc., between the front and the base of operations, and that a due proportion shall be constantly at the service of each gun during an engagement.

Field-works. Are intrenchments and other temporary fortifications thrown up by an army in the field, either as a protection from the onslaught of a hostile force, or to cover an attack upon some stronghold. All works which do not come under the head of permanent fortification are called field-works.

Fiesole (anc. *Fæsulæ*). One of the most ancient Etruscan cities, situated about 8 miles from Florence. This city was first mentioned in 225 B.C. during the great Gaulish war. Hannibal encamped here after crossing the Apennines. The city was next destroyed by Sulla in the Social war (90-89 B.C.), who afterwards dispatched thither a military colony. About the beginning of the 11th century, it was destroyed by the Florentines, and many of its inhabitants compelled to remove to the city of Florence.

Fife. A wooden wind instrument, which is used with the snare-drum for playing military music. The music is produced by blowing through a hole in a reed or tube, while the escape of air is regulated by the fingers stopping or opening a number of other holes in different parts of the pipe.

Fife-Major. The chief or superintendent of the fifers of a regiment.

Fifer. One who plays a fife; there is one fifer allowed to each company of infantry in the U. S. army. Fifers are also employed aboard men-of-war, and in the marine corps.

Fight. To strive or contend for victory, in battle or in single combat; to defeat, subdue, or destroy an enemy, either by blows or weapons; to contend in arms;—followed by *with* or *against*.

Fight. To carry on, or wage, as a conflict, or battle; to win or gain by struggle, as one's way; to sustain by fighting, as a cause. To contend with in battle; to war against, as, they fought the enemy in two pitched battles. To cause to fight; manage or manoeuvre in a fight.

Fight. A battle; an engagement; a contest in arms; a struggle for victory, either between individuals or between armies,

ships, or navies. A duel is called a single fight or combat.

Fighter. One who fights; a combatant; a warrior.

Fighting. Qualified for war; fit for battle; as, "A host of fighting men." Also, occupied in war; being the scene of war; as, a fighting field.

Fight, Running. That in which the enemy is continually chased.

Figueras. A town in the northeast of Spain, province of Gerona. On a height near the town is the citadel of San Fernando, the strongest fortress of Spain, and the key of the Pyrenees on their south side. It has accommodation for 2000 men.

Figure. In fortification, the plan of any fortified place, or the interior polygon. Of this there are two sorts, regular and irregular; a regular figure is that where the sides and angles are equal; an irregular one where they are unequal.

File. A line of soldiers drawn up behind each other, in contradistinction to rank, which refers to men standing beside one another. The general term means two soldiers, consisting of the front and rear rank men. To *file* is to advance to or from any given points by files; as, to file to the front, etc. To *file off*, or to *defile*, is to wheel off by files from moving in a spacious front, and march in length. *Flank file*, is the extreme file on the right or left of a squadron or troop, battalion or company, etc. *Indian files*, a line of men advancing or retreating from either of the flanks, from the centre or from any proportion of a line in succession to one another.

File Firing. Firing by files.

File-leader. Is the soldier placed in front of any file, or the man who is to cover all those who stand directly in the rear of him, and by whom they are to be guided in all their movements.

Filibuster. A lawless military adventurer, especially one in quest of plunder; a freebooter; a pirate; applied especially to the followers of Lopez in his expedition to Cuba in 1851.

Filings. Are movements to the front, rear, or flanks by files.

Fillet. A molding used on cannon of old pattern.

Filibeg, or Filibeg. A little plaid; a kilt or dress reaching nearly to the knees, worn in the Highlands of Scotland, and by the soldiers of Highland regiments in the British service.

Filibuster. See **FILIBUSTER**.

Final Velocity. In gunnery, is the technical term for the uniform velocity which a projectile would acquire in falling through an indefinite height in the air. A body falling in *vacuo* is uniformly accelerated, its velocity being continually increased. In the atmosphere the case is different. Since the resistance of the air increases with some power of the velocity greater than the square, it follows that at some point in the

descent the retardation becomes equal to the acceleration, and the body will move with uniform velocity. This is called "final velocity," and is one of the most important elements in the theory of projectiles. Every projectile has its own "final velocity." Other things being equal, that projectile is best which has the greatest "final velocity." The "final velocity" of a given projectile will depend upon its weight on the one hand, and the extent of surface and the way it is presented to the air on the other. The extent and form of the surface directly opposed to the action of the air will largely determine the resistance. The best form, as determined by the experiments of Borda, is the *ogival*. The resistance, other things being the same, may be taken as proportional to the area of greatest cross-section. The weight in spherical projectiles is proportional to the cube of this dimension. It follows from these general principles that large projectiles are better than small, dense better than light, solid better than hollow, in regard to their final velocities; moreover, that oblong projectiles are better than spherical, ogival-headed oblong better than flat-headed, and long rifle projectiles better than short, in the same regard.

Finding. Before a court-martial deliberates upon the judgment, the judge-advocate reads over the whole proceedings of the court; he then collects the votes of each member, beginning with the youngest. The best mode of doing so is by slips of paper. The Articles of War require a majority in all cases, and in cases of sentence of death two-thirds. It is not necessary to find a *general* verdict of guilt or acquittal upon the whole of every charge. The court may find the prisoner guilty of part of a charge, and acquit him of the remainder, and render sentence according to their finding. This is a *special* verdict.

Finland. A Russian grand duchy; in the middle of the 12th century was conquered by the Swedes, who introduced Christianity. It was several times conquered by the Russians (1714, 1742, and 1808), and restored (1721 and 1743); but in 1809 they retained it by treaty.

Fire. In the art of war, a word of command to soldiers of all denominations to discharge their fire-arms, cannon, etc. It likewise expresses a general discharge against an enemy. To be "under fire" means to be exposed to the attack of an enemy by cannonade or fusillade. The fire in artillery may be either direct, ricochet, rolling, plunging, horizontal, or vertical, according to the nature of the projectile and the angle of elevation. A fire is said to be *direct*, when the projectile hits the object without striking any intermediate one; *ricochet*, when the projectile strikes the ground or water under a small angle of fall, penetrates obliquely to a certain distance, and is then reflected at an angle greater than the angle of fall. This action may recur frequently, depend-

ing, as it does, on the nature of the surface struck, the initial velocity, shape, size, and density of the projectile, and on the angle of fall. It is employed in siege-works to attain the face of a work in flank, or in reverse; and in the field, or on water, when the object is large, and the distance is not accurately known. The character of ricochet fire is determined by the angle of fall. It is *flattened* when this angle does not exceed 4° , and *curved* when the angle is between 6° and 15° . Against troops the angle of fall should not exceed 8° . A particular kind of ricochet fire called *rolling* is produced by placing the axis of the piece parallel, or nearly so, with the ground. It was formerly much used when the conditions were favorable in the field service, where it was very effective, as the projectile never passes at a greater distance above the ground than the muzzle of the piece. The projectile was solid round shot; rifled projectiles are unsuited to this kind of fire. When the object is situated below the piece, the fire is said to be *plunging*. This kind of fire is particularly effective against the decks of vessels. Under low angles of elevation the fire of guns and howitzers is said to be *horizontal*. The fire of mortars under high angles of elevation is called *vertical*.

Fire-alarm. An alarm given of a fire or conflagration. In military barracks or camp, it is sounded on drum or bugle, or the discharge of fire-arms by the guard.

Fire, Angle of. See POINTING.

Fire-arms. Every description of arms charged with powder and ball. See special headings.

Fire-arrow. A small iron dart, furnished with a match impregnated with powder and sulphur, used to fire the sails of ships.

Fire-ball. See PYROTECHNY.

Fire-bavin. A bundle of brushwood used in fire-ships.

Fire-bucket. A bucket to convey water for extinguishing fires. To each set of quarters in a garrison there are allotted a certain number of fire-buckets.

Fire-cross. An ancient token in Scotland for the nation to take up arms.

Fire, Curved, or Curvated. See FIRE.

Fire, Direct. See FIRE.

Fire-eater. One notoriously fond of being in action.

Fire, Effects of. See PROJECTILES, EFFECTS OF.

Fire, Enfilade. Fire in the direction of the length of a parapet or a line of troops.

Fire-engine. A hydraulic or forcing pump for throwing water to extinguish fires.

Fire, Greek. See GREEK FIRE.

Fire-hoops. A combustible invented by the Knights of Malta to throw among their besiegers, and afterwards used in boarding Turkish galleys.

Fire, Line of. See POINTING.

Firelocks. Were fire-arms formerly used by foot-soldiers; they were so called from their producing fire of themselves,

by the action of the flint and steel. They were first made use of in 1690, but it is not ascertained when they were first invented. About the middle of the last century a fire-lock was called, by military writers, *asnap-baan*, which being a low Dutch word, seems to indicate its being a Dutch invention.

Fire-master. In the artillery, was a commissioned officer who gave the directions and proportions of all ingredients for each composition required in fireworks, whether for the service of war, or for rejoicings and recreation.

Fire-master's-mate. In the artillery, a commissioned officer whose duty was to aid and assist the chief fire-master; and he was required to be skilled in every kind of laboratory works.

Fire, Oblique. That which strikes a parapet or a body of troops in a slanting direction.

Fire-pan. A pan for holding or conveying fire; especially, the receptacle for the priming in a gun.

Fire, Plane of. See POINTING.

Fire, Plunging. See FIRE.

Fire-pot. A small earthen pot, into which is put a charged grenade, and over that, powder enough to cover the grenade; the whole covered with a piece of parchment, and two pieces of quick-match across lighted; it breaks and fires the powder, as also the powder in the grenade, which has no fuze, that its operations may be quicker; it burns all that is near it. These are no longer used.

Fire Rasant. Is produced by firing the artillery and small-arms in a line parallel with those parts of the works you are defending.

Fire, Reverse. Is that which strikes the rear of a parapet or body of troops.

Fire, Ricochet. See FIRE.

Fire, Slant. Is when the shot strikes the interior slope of the parapet, forming with it a horizontal angle, not greater than 30° .

Fire Stone. A composition placed in a shell with the bursting charge, to set fire to ships, buildings, etc. It is made by stirring nitre, sulphur, antimony, and rosin in a mixture of melted tallow and turpentine. It is cast in molds made of rocket-paper. A priming of fuze composition is driven in a hole to insure its ignition.

Fire-swab. The bunch of rope-yarns sometimes secured to the tampion, saturated with water to cool the gun in action, and to swab up any grains of powder.

Fire, Tables of. In artillery, are tabulated statements for each piece, showing the range and time of flight for each elevation, charge of powder, and kind of projectile. Their purpose is to assist the artilleryist in attaining his object without waste of time and ammunition, and also to regulate his aim when the effect of shot cannot be seen on account of the dust and smoke of the battle-field. The first few shots generally produce a great effect on the enemy, and it

is very important that they should be directed with some knowledge of their results, which, in the field, can only be attained by experience, or from the data afforded by a table of fire. Tables of fire for different kinds of cannon may be found in the Ordinance and Artillery Manuals.

Fire, Vertical. See FIRE.

Fire-workers. In the British service, were formerly subordinate to the fire-master and his mate; had afterwards the rank of youngest lieutenants in the regiment of artillery, but now that rank is abolished, and they are all second lieutenants. They were supposed to be well skilled in every kind of laboratory-work, which knowledge is an essential qualification in every officer of that branch of the service.

Fireworks. Are various combustible preparations used in war. See PYROTECHNY.

Firing. The act of discharging fire-arms.

First Sergeant. The ranking non-commissioned officer in a company. He has immediate charge of all enlisted men of the company and company property; has command of it during formations, and calls the roll. He also makes all details, keeps the roster, etc. See ORDERLY SERGEANT.

Fishguard. A seaport town of South Wales, county of Pembroke. About 2½ miles south of this town a French force of 1400 men, under Gen. Tate, landed on February 22, 1797, and next day surrendered to a few militia and volunteers not half their number.

Fishtail Wind. A term in target practice with small-arms for a rear wind which is variable in direction.

Fish Torpedoes. See TORPEDOES.

Fissure. A narrow chasm where a small breach has been made, as in a fort, citadel, etc.

Five Forks. A name given to a locality in Dinwiddie Co., Va., the junction of the White Oak and Ford's road with the one leading to Dinwiddie Court-house. An important battle was fought here April 1, 1865. The possession of this radiating centre was one of great strategic importance, inasmuch as by Ford's road the South-side Railroad could be reached, and, indeed, the whole country which the intrenched Confederate lines were intended to cover. The attempt to gain possession of this position had been made (March 30-31), by Gen. Sheridan, with momentary success (March 31), during the absence of most of the Confederate force, engaged in fighting Warren on the White Oak road, but which now being recalled, regained possession, driving Sheridan back towards Dinwiddie Court-house. On the morning of April 1 Sheridan renewed the attempt, and after a day of very severe fighting compelled the surrender of nearly all the Confederate force, pursuing such as escaped till after dark. Over 6000 prisoners were captured with 5 guns. The Union loss was not above 1900 all told. The effect of this decisive battle

was to determine Lee to abandon Petersburg, which he did under cover of night (April 2), but not before his entire outer line of works had been carried during the day. One week later Lee surrendered his army at Appomattox Court-house.

Fix Bayonets. A word of command in the manual exercise, whereby the bayonets are fixed on the rifles.

Fixed Ammunition. Consists of a projectile and its cartridge which are attached to the same block of wood called a *sabot*. See ORDINANCE, AMMUNITION FOR.

Flag, Black. A flag of a black color, displayed as a sign that no mercy will be shown to the vanquished, or that no quarter will be given.

Flag, Garrison. In the U. S. army the garrison flag is the national flag, and is 86 feet fly and 20 feet hoist. It is furnished only to very important posts, or those having large garrisons, and is hoisted only on gala days and great occasions.

Flag of the Prophet (*Sanjak-Sheriff*). Is the sacred banner of the Mohammedans. It was originally of a white color, and was composed of the turban of the Koreish, captured by Mohammed. A black flag was, however, soon substituted in its place, consisting of the curtain that hung before the door of Ayesha, one of the prophet's wives. This flag is regarded by the Mohammedans as their most sacred relic; it was brought into Europe by Amurath III. It was covered with forty wrappings of silk, deposited in a costly casket, and preserved in a chapel in the interior of the seraglio, where it is guarded by several emirs, with constant prayers. The banner unfolded at the commencement of a war, and likewise carefully preserved, is not the same, although it is believed by the people to be so.

Flag of Truce. A white flag carried by an officer sent to communicate with the enemy. The flag signifies his errand, but the enemy are not bound to receive him, though it would be a violation of the rules of war to injure the messenger, unless he persisted in his endeavor to communicate after due warning given. The term is often extended to the party which accompanies the flag, which consists generally of an officer, a trumpeter or bugler, who sounds to attract attention, and sometimes of an additional soldier who carries the flag.

Flag, Post. In the U. S. army, is the national flag, and is 20 feet fly and 10 feet hoist; it is furnished to all posts garrisoned by troops, and is hoisted only in pleasant weather.

Flag, Red. Is frequently used by revolutionists as an emblem of defiance. It is used in the U. S. service as a danger-signal at target practice, and on a man-of-war as a signal that the ship is receiving or discharging her powder.

Flags. See COLORS, STANDARDS, etc.

Flags. The national flag of the United States consists of 13 horizontal stripes, alter-

nately red and white; the union to consist of 20 stars, white, in a blue field; one star to be added to the union on the admission of every new State; the addition to be made on the 4th day of July succeeding such admission. There are flags which are symbols of individual authority. Among such are royal standards, flag-officers' flags, etc. An admiral's flag is usually the flag of the country which such admiral serves, with the exception of the union. The flag of the admiral, vice-admiral, and rear-admirals of the United States is rectangular and consists of 13 alternate red and white stripes. The admiral hoists this at the main; the vice-admiral at the fore; the rear-admiral at the mizzen. Should there be two rear-admirals present, the junior hoists a flag at the mizzen similar to the one described, with the addition of two stars in the upper left-hand corner. The commodore's flag differs from that of the admiral's in form alone, it being a swallow-tail instead of a rectangular. Should the President go afloat, the American flag is carried in the bows of his barge or hoisted at the main of the vessel on board of which he may be. In foreign countries the royal standard is worn at ceremonies in honor of the sovereign or at which the sovereign may be present. The highest flag in the British navy is the anchor and cable, the next is the union, and the lowest the blue. Flags are said to be at half-mast when they are hoisted but half the height at which they are ordinarily worn, and in this position designate mourning. *To strike or lower the flag*, to pull it down upon the cap, in token of respect, submission, or, in an engagement, of surrender. *Dipping the flag* is a salute to a fort or passing vessel by lowering it slightly and hoisting it again.

Flag-staff. The staff on which a flag is fixed.

Flag, Storm. In the U. S. army, is the national flag, and is 8 feet fly and 4 feet 2 inches hoist; it is furnished to all occupied military posts and national cemeteries, and will be hoisted in stormy or windy weather. It is also to be used as a recruiting flag.

Flam. A peculiar tap upon a drum. This word was formerly made use of in the British service, signifying a particular tap or beat upon the drum, according to which each battalion went through its firings or evolutions.

Flambeau. A kind of torch made of thick wicks, covered with wax, and used in the streets at night, at illuminations and in processions.

Flanchière (Fr.). A part of horse armor which covered the flanks and croup as far as the houghs.

Flanconade. In fencing, a thrust in the side.

Flanders. The principal part of the ancient Belgium, which was conquered by Julius Cæsar, 61 B.C. It became part of the kingdom of France in 843, and was governed by counts subject to the king, from

862 till 1869. Flanders was subjected successively to Burgundy (1384), Austria (1477), and Spain (1555). In 1580 it declared its independence, but afterwards returned to its allegiance to the house of Austria. In 1792 the French invaded imperial Flanders, and occupied it till 1814. In 1814 a portion of Flanders was given to the king of the Netherlands. Since the revolution of 1831, it has belonged to Belgium.

Flank. A word of very extensive application in military matters. It literally means sides or ends of any fortification, or encampment, or body of troops. Thus a writer has described flanks as "certain proportions of offensive or defensive forces extended to the right and left of a main body." In fortification the term means any part of the work defending another by a fire along the outside of its parapet.

Flank Casemate Carriage. Is a gun-carriage which is especially adapted to the mounting of the 24-pound iron howitzer in the flanks of casemate-batteries, for defending the ditch.

Flank Company. A certain number of men drawn up on the right or left of a battalion. Thus when there are grenadiers they compose the right, and the light infantry the left flank company. Grenadiers and light infantry are generally called flank companies, whether attached or not to their battalions; rifle corps are always flankers.

Flank, Concave. Is that which is made in the arc of a semicircle bending outwards.

Flank, Covered. The platform of the casemate, which lies hid in the bastion. These retired flanks were a great defense to the opposite bastion and passage of the ditch; because the besiegers could not see nor easily dismount their guns.

Flank Defense Carriage. See ORDNANCE, CARRIAGES FOR, SEA-COAST CARRIAGES.

Flank, Directing. In drill, that by which companies march,—i.e., that at which is placed the guide, who directs and regulates the march.

Flank En Potence. Is any part of the right or left wing formed at a projecting angle with the line. See POTENCE.

Flank Files. Are the two first men on the right and the two last men on the left of a battalion, company, etc. When a battalion is drawn up three deep, its flank files consist of three men, or, as the French call it, file and demi-file. When four deep, the flank files are termed double files; so that a column formed from any of these alignments will have all its relative flank files, be the depth of formation what it may.

Flank, Inner. That which is nearest the point on which a line rests, or which is farthest from the enemy. In drill, it is that nearest the point from which the line is dressed.

Flank, Leading. When the line breaks into column in order to attack an enemy, it is the flank which must always preserve the line of *appui* in all movements in front. The

first battalion, or company of every column which conducts, is called the head or leading flank of that column.

Flank, Oblique. Or second flank, in fortification; that part of the curtain from whence the face of the opposite bastion may be discovered, and is the distance between the lines *rasant* and *fichant*, which are rejected by some engineers, as being liable to be ruined at the beginning of a siege, especially when made of sandy earth. This second flank defends very obliquely the opposite face, and is to be used only in a place attacked by an army without artillery.

Flank of a Bastion. In fortification, that part which joins the face to the curtain, comprehended between the angle of the curtain and that of the shoulder, and is the principal defense of a place. Its use is to defend the curtain, the flank, and the face of the opposite bastion, as well as the passage of the ditch; and to batter the salient angles of the counter-scarp and glacis, from whence the besiegers generally ruin the flanks with their artillery.

Flank, Outward. Of a line or battalion, the extreme file on the right or left of a division, subdivision, or section, according to the given front, when the battalion is at close or open column, and which is the farthest wheeling point from line into column, or from column into line. It is likewise called the *reverse* flank.

Flank, Prolonged. In fortification, is the extending of the flank from the angle of the epaule to the exterior side, when the angle of the flank is a right one.

Flank, Second. See **FLANK, OBLIQUE.**

Flank, To. In fortification, is to erect a battery which may play upon an enemy's works on the right or left without being exposed to his line of fire. In evolutions, to take such a position in action as either to assist your own troops, or to annoy those of your enemy by attacking either of his flanks, without exposing yourself to all of his fire. To *outflank*, a manœuvre by which an army, battalion, troop, or company outstretches another, and gets upon both or either of his flanks. In an extensive acceptance of the term, when applied to locality, it means to possess any range or opposite parts, or territory, whence you might invade your neighbors.

Flanker. A fortification jutting out so as to command the side or flank of an enemy marching to the assault or attack. Riflemen and all light troops are also called flankers, from the fact of their acting on the flanks.

Flanker, To (*Fr. flanquer*). In fortification, to fortify the walls of a city with bulwarks or countermines.

Flanking. Is the same in fortification as defending.

Flanking Angle. In fortification, that composed of the two lines of defense, and pointing toward the curtain. See **TENAILLE.**

Flanking Party. Any body of men detached from the main army to act upon the flanks of an enemy. See **FLANKER.**

Flanks of a Frontier. Are certain salient points in a national boundary, strong by nature and art, and ordinarily projecting somewhat beyond the general line. The effect of these flanks is to protect the whole frontier against an enemy, as he dare not penetrate between, with the risk of their garrisons, reinforced from their own territories, attacking his rear, and cutting off communication between him and his base.

Flash. The flame which issues from any fire-arm or piece of ordnance on its being fired.

Flash in the Pan. An explosion of gun-powder without any communication beyond the vent. When a piece is loaded, and, upon the trigger being drawn, nothing but the priming takes fire, that piece is said to flash in the pan.

Flask, Powder-. A measure formerly made of horn, used to carry powder in, with the measure of the charge of the piece on the top of it.

Flathead Indians. A tribe of aborigines, so called from the practice which prevailed among them of binding some solid substance on the foreheads of their children so as to cause a depression of the skull. They are located on an agency in Montana. See **INDIANS AND THEIR AGENCIES.**

Flaw. A crack or small opening in a gun or its carriage is so called.

Fleau d'Armes (*Fr.*). An ancient offensive weapon; the part used for striking was armed with sharp iron spikes.

Flèche. Literally an arrow; but applied in fortification to a work resembling a redan, except that it is raised upon the *terre-plein* without a ditch. It is in short a field-work, having faces and small flanks hastily run up to shelter a small number of men, and form an outwork to some more powerful fortification.

Fleece, Order of the Golden. One of the most eminent orders of knighthood in Europe, was founded in 1430 by Philip III., duke of Burgundy. By its foundation his successors were declared hereditary grand-masters; and thus the title passed to the imperial house of Austria with the Burgundian inheritance, and thence to the Spanish line of the same house after the death of the emperor Charles V. When the Spanish Netherlands, however, became Austrian, and the Bourbons became monarchs of Spain, the grand-mastership was claimed by the archdukes of Austria. Hence at present the Spanish and Austrian sovereigns alike confer the order, and at both courts it gives the highest rank.

Fletch, To. To feather an arrow.

Fletcher. The man who made or repaired the military bows was so called. Also called *bowyer*.

Fleur-de-lis (*Fr.*). This celebrated emblem is derived from the white lily of the garden, or from the flag or iris. The Franks of old had a custom at the proclamation of their king, to elevate him upon a shield or target, and place in his hand a reed or flag

in blossom, instead of a sceptre; and from that time the kings of the first and second race in France are represented with sceptres in their hands like the flag with its flowers, these flowers subsequently becoming the armorial bearings of France. In later times their arms were azure, three fleur-de-lis or. Many English and Scotch families bear the fleur-de-lis in some portion of their arms, and generally with some reference to France.

Fleurus. A small town in Belgium, in the province of Hainault. It has been the scene of several conflicts, the last and most important being the battle fought June 26, 1794, between the army of the French republic under Jourdan and the allies under the Prince of Saxe-Coburg. The allied forces were compelled for a time to evacuate Flanders.

Flight. Is used figuratively for the swift retreat of an army or any party from a victorious enemy. It is likewise applicable to missile weapons or shot; as, a flight of arrows, a flight of bombs, etc.

Flight, Time of. In gunnery, the flight of a shot or shell is the time during which it is passing through the air from the piece to the first graze.

Flight, To Put to. To force your enemy to quit the field.

Flint. In the flint-lock musket, the stone which was fixed to the cock or gun-lock by which the sparks were elicited that discharged the piece.

Flint-lock. A musket lock with a flint fixed in the hammer for striking on the cap of the pan; also the musket itself.

Flint Weapons. Believed to have been used by the primitive inhabitants, have from time to time, in more or less number, been turned up with the plow and the spade, and dug out from ancient graves, fortifications, and dwelling-places. They do not differ in any material respect from the flint weapons still in use among uncivilized tribes in Asia, Africa, America, etc. The weapons of most frequent occurrence are arrow-heads, spear-points, dagger-blades, and axe-heads, or celts.

Flo. An arrow was formerly so called.

Floating Batteries. These are used in defending harbors, or in attacks on marine fortresses. The most remarkable instance of their employment was by the French and Spaniards against Gibraltar, in the memorable siege which lasted from July, 1779, to February, 1783. During the Russian war, 1854-55, they rendered good service before Kinburn. Now they are only used for defensive purposes.

Floating-bridge. A kind of double bridge, the upper one projecting beyond the lower one, and capable of being moved forward by pulleys, used for carrying troops over narrow moats in attacking the outworks of a fort. See **BRIDGE, FLYING**.

Flodden Field. The last point of the Cheviots, the place where King James IV. of Scotland, after crossing the border on

August 22, 1513, with an army of over 80,000 men, took up his position, and where, on September 9, the bloody battle was fought in which the king was killed, and the Scottish army destroyed.

Flogging. A barbarous punishment formerly inflicted in the British army and navy. It was generally administered with a whip, or "cat-of-nine-tails," on the bare back. This mode of punishment formerly existed in the American army and navy.

Flood-gate. In fortified towns, is composed of 2 or 4 gates, so that the besieged by opening the gates may inundate the environs so as to keep the enemy out of gunshot.

Florent, St. A fortified seaport town of Corsica, on the gulf of the same name, 6 miles west from Bastia. This town was taken by the British in 1798.

Florida. One of the United States of America, which was discovered by Sebastian Cabot, in the year 1497. Its conquest was accomplished by the Spaniards in 1589. It was plundered by Sir Francis Drake in 1585; and by Davis, a buccaneer, in 1665. It was invaded by the British in 1702; and again by Gen. Oglethorpe in 1740. In 1763 it was ceded to Britain, but in 1781 was recovered by Spain, and confirmed to her by the peace of 1783. In 1821 it was purchased from Spain by the United States. A war with the Seminole Indians commenced in 1835. After great trouble and expense they were subdued and emigrated to the Indian Territory in 1842. In 1839 its constitution was formed, and in 1845 it was admitted into the Union. Florida seceded from the Union on January 10, 1861, and was one of the first to return to the Union, October 25, 1865.

Flourish. The waving of a weapon or other thing; a brandishing; as, the flourish of a sword.

Flourish. To execute an irregular or fanciful strain of music, by way of ornament or prelude, as, a flourish of trumpets.

Fugelman. The leader of a file; one who stands in front of a body of soldiers, and whose motions in the manual exercise they all simultaneously follow; a fugelman.

Flushed. A term frequently applied when men have been successful; as, flushed with victory, etc.

Flushing. An important seaport of the Netherlands, in the island of Walcheren, on the north side of the Scheldt, where that river enters the North Sea. It was the first town which declared against the Spaniards in 1572. In 1585 the Prince of Orange pledged it to Queen Elizabeth as security for a loan which she made to the people of the Netherlands in their struggle against Philip II. of Spain. The English held it till 1616. At the commencement of the 19th century it came into the possession of the French, and in 1809 was bombarded by the British composing the Walcheren expedition, under Lord Chatham, when it suffered severely. Admiral Ruyter was born here in 1607.

Flute. A wind instrument which is sometimes used in military bands, but never in service.

Fly. The length of a flag. The dimension at right angles to the staff. The other dimension is called the *hoist*.

Flying Army. A strong body of cavalry and infantry which is always in motion, both to cover its own garrisons and to keep the enemy in continual alarm.

Flying Artillery. Artillery trained to very rapid evolutions. In passing from one part of the field to another, the men spring upon their horses in horse artillery, or on the ammunition-chests in light artillery.

Flying Bridges. See **PONTONS**.

Flying Camp. A camp or body of troops formed for rapid motion from one place to another.

Flying Colors. Colors unfurled and left to wave in the air. Hence to return or come off with flying colors is to be victorious, to get the better.

Flying Party. A detachment of men employed to hover about an enemy.

Flying Sap. See **SAP**.

Flying Shot. A shot fired at something in motion, as a bird on the wing, a ship under sail, etc.; also, one who fires thus.

Flying Torch. The torch used on a staff in signaling.

Fodder. See **FORAGE**.

Foe. An enemy in war; a national enemy; a hostile army; an adversary.

Foeman. An enemy in war.

Fogey. An old-fashioned or singular person; an invalid soldier or sailor.

Foil. A long piece of steel of an elastic temper, mounted somewhat like a sword, which is used to learn to fence with; it is without a point, or any sharpness, having a button at the extremity covered with leather.

Foil. To render vain or nugatory as an effort or attempt; to frustrate; to defeat; to baffle; to balk; as, the enemy attempted to pass the river, but was *foiled*; he *foiled* his adversaries.

Foin. A thrust with a pike or sword.

Foissonnement. A term used in fortification to signify the increase in bulk of earth after its excavation. This increase varies from one-eighth to one-twelfth generally.

Folding Boat. A boat of a jointed framework covered with canvas, used in campaigning and by voyageurs.

Followers, Camp-. See **CAMP-FOLLOWERS**.

Follow Up. To pursue with additional vigor some advantage which has already been gained; as, to follow up a victory.

Fone. Formerly the plural of *Foe*. Now obsolete.

Fontainebleau. A town and parish of France, in the department of the Seine and Marne, 37 miles southeast from Paris. There is a celebrated royal palace here encompassed by parks and gardens, mentioned in history, ever since the 13th century, as

the residence of the monarchs of France. This place was entered by the Austrians, February 17, 1814. Here Napoleon resigned his dignity, April 4, and bade farewell to his army, April 20, 1814.

Fontenoy. A village in Belgium, in the province of Hainaut, 5 miles southwest of Tournay. Here was fought the most famous contest in the War of the Austrian Succession, on May 11, 1745, between the French under Marshal Saxe and the allies (English, Dutch, and Austrians) under the Duke of Cumberland. After a hard-fought battle the allies were forced to retreat. The loss on both sides was stated at about 7000 men.

Food. Food has two functions, building up the body, and supplying it with force. Substances used as food may be divided into elements which are oxidizable and those conducive to chemical changes. Milk contains all the necessary elements in the best form. The nourishing elements of foods are usually classed under the heads of albuminates, fats, carbo-hydrates, and salts. In regard to the part played by the condiments used in flavoring and seasoning, and such things as tea, coffee, chocolate, alcohol, etc., little is positively known beyond the fact that some of them are useful in exciting the salivary and alimentary secretions. The amount of food necessary to health and vigor varies with the kind and amount of occupation, the character of the climate, and specifically with the individual. Playfair and Parkes give the following as the average daily allowance of anhydrous food for an adult, in avoirdupois ounces:

In quietude.

| | |
|---------------------|-----|
| Albuminates..... | 2.5 |
| Fats..... | 1. |
| Carbo-hydrates..... | 12. |
| Salts..... | .5 |
| Total..... | 16. |

Hard labor or campaigning.

| | |
|---------------------|--------------|
| Albuminates..... | 6. to 7. |
| Fats..... | 3.5 to 4.5 |
| Carbo-hydrates..... | 16. to 18. |
| Salts..... | 1.2 to 1.5 |
| Total..... | 26.7 to 31.0 |

European standard, for moderate work.

| | |
|---------------------|--------|
| Albuminates..... | 4.587 |
| Fats..... | 2.964 |
| Carbo-hydrates..... | 14.257 |
| Salts..... | 1.058 |
| Total..... | 22.866 |

From 70 to 90 ounces of water in addition to this are usually consumed per day.

The ration of the U. S. army resolved into anhydrous elements gives the following:

Soft bread, with $\frac{1}{2}$ fresh beef, $\frac{1}{2}$ salt pork and beans.

| | |
|---------------------|----------------------|
| Albuminates..... | 3.93 |
| Fats..... | 4.15 |
| Carbo-hydrates..... | 12.37 |
| Salts..... | 1.19 |
| Total..... | 21.64 and 26 coffee. |

Same with rice instead of beans.

| | |
|---------------------|-------|
| Albuminates..... | 3.47 |
| Fats..... | 4.11 |
| Carbo-hydrates..... | 12.50 |
| Salts..... | 1.14 |

Total..... 21.22 and .26 coffee.

Hard bread, $\frac{2}{3}$ fresh beef, $\frac{1}{3}$ salt pork and beans.

| | |
|---------------------|-------|
| Albuminates..... | 4.99 |
| Fats..... | 4.00 |
| Carbo-hydrates..... | 15.26 |
| Salts..... | 1.23 |

Total..... 25.57 and .26 coffee.

Hard bread, bacon and beans.

| | |
|---------------------|-------|
| Albuminates..... | 4.10 |
| Fats..... | 9.06 |
| Carbo-hydrates..... | 15.26 |
| Salts..... | 1.29 |

Total..... 29.71 and .26 coffee.

The following table, compiled from standard authorities, gives an alimentary analysis of 100 parts of various substances used as food, by means of which the nutritive value of all ordinary diets may be calculated:

| | Water. | Albuminates. | Fats. | Carbo-Hydrates. | Salts. |
|--|--------|--------------|-------|-----------------|--------|
| Meat (best quality), beefsteak..... | 74.4 | 20.5 | 3.5 | ..... | 1.6 |
| Meat (average like soldiers), less 1-5 for bone..... | 75. | 15. | 8.4 | ..... | 1.6 |
| Meat (very fat, stall fed)..... | 63. | 14. | 19. | ..... | 3.7 |
| Salt beef (Girardin)... | 49.1 | 29.6 | 0.2 | ..... | 21.1 |
| Salt pork (Girardin)... | 44.1 | 26.1 | 7. | ..... | 22.8 |
| Fat pork (Letheby)... | 39. | 9.8 | 46.9 | ..... | 2.3 |
| Bacon (salted and smoked) (Letheby)... | 15. | 8.8 | 73.3 | ..... | 2.9 |
| Fish (Letheby)..... | 78. | 18.1 | 2.9 | ..... | 1. |
| Poultry, less lons $\frac{1}{2}$ (Letheby)..... | 74. | 21. | 3.8 | ..... | 1.2 |
| Butter..... | 8. | 3 | 91. | ..... | 2.5 |
| Eggs (less 1-10 for shell)... | 73.5 | 13.5 | 11.6 | ..... | 1. |
| Cheese..... | 36.8 | 33.5 | 24.3 | ..... | 5.4 |
| Bread (wheat, average quality)..... | 40. | 8. | 1.5 | 49.2 | 1.3 |
| Biscuit, hard..... | 8. | 15.6 | 1.3 | 73.4 | 1.7 |
| Wheat flour (average)... | 15. | 11. | 2. | 70.3 | 1.7 |
| Rice..... | 10. | 5. | 0.8 | 83.2 | .5 |
| Oatmeal..... | 15. | 12.6 | 5.6 | 63. | 3. |
| Cornmeal..... | 13.5 | 10. | 6.7 | 64.5 | 1.4 |
| Peas (dry)..... | 15. | 22. | 2. | 53. | 2.4 |
| Beans (dry)..... | 16. | 22.5 | 2.2 | 49.9 | 4.7 |
| Potatoes, Irish..... | 74. | 1.5 | 0.1 | 23.4 | 1. |
| Potatoes, sweet..... | 70.2 | 1.5 | 0.3 | 23.5 | 2.9 |
| Yams..... | 74. | 2. | 0.5 | 16.2 | 1.3 |
| Carrots..... | 85. | .8 | 0.25 | 8.4 | .7 |
| Parsnips..... | 82.4 | 1.125 | 0.54 | 6.39 | 1. |
| Turnips..... | 90.5 | 1.1 | ..... | 4. | .5 |
| Cabbage..... | 91. | .2 | 0.5 | 5.8 | .7 |
| Milk (average)..... | 86.3 | 3.5 | 3.1 | 4.5 | .5 |
| Cream..... | 66. | 2.7 | 26.7 | 2.8 | 1.8 |
| Sugar..... | 3. | ..... | ..... | 96.5 | .5 |

Foot. The foot-soldiers; the infantry, usually designated as the foot, in distinction from the cavalry.

Foot. To gain or lose ground foot by foot, is to do it regularly and resolutely; defend-

ing everything to the utmost extremity, or forcing it by dint of art or labor.

Foot Artillery. Artillery troops serving on foot. Heavy artillery.

Foot-band. A band of infantry.

Foot-bank. See BANQUETTE.

Foot-boards. The transverse boards on the front of a limber, on which the cannoneers rest their feet when mounted.

Foot-fight. A conflict by persons on foot; in opposition to a fight on horseback.

Foot Guards. Guards of infantry. The flower of the British infantry, and the garrison ordinarily of the metropolis, comprise 8 regiments, the Grenadier, Coldstream, and Scots Fusilier Guards, in all 7 battalions, and 6807 officers and men of all ranks.

Footing. To be on the same footing with another, is to be under the same circumstances in point of service; to have the same number of men, and the same pay, etc.

Footman. A soldier who marches and fights on foot.

Foot-pound. In mechanics, is the unit of work. It is simply a contraction for "one pound raised through a height of one foot." See WORK.

Foot-soldier. A soldier that serves on foot.

Foot-ton. In England the power of modern ordnance is estimated by the energy of the shot in foot-tons, divided by the number of inches in the shot's circumference. The formula for calculating it is

$$E = \frac{WV^2}{2\pi r \cdot g}$$

in which W is the weight of the shot in tons (English), V is the velocity, $2\pi r$, the circumference of the shot in inches, and g the force of gravity; $\frac{WV^2}{g}$ is the living force of the

shot, and is equal to twice the quantity of work it is capable of doing. This divided by the circumference gives a very fair estimate of its power in penetrating armor, as the resistance to penetration increases with the size of the projectile. This unit is also used to estimate the resisting power of armor-plating against shots of various sizes.

Forage. The hay, corn, fodder, and oats required for the subsistence of the animals in the army. The allowance of forage in the U. S. army is fixed by regulations at 14 pounds of hay and 12 of grain to each horse, and 14 pounds of hay and 9 of grain to each mule in the public service. Generals, field-officers, staff-officers, and cavalry officers receive forage for a certain number of private horses while actually kept in service.

Forage. To collect supplies both for man and beast, from an enemy by force, from friends by imbursement, but giving to friends receipts, to be paid ultimately.

Forage Cap. A small low cap worn by soldiers when not in full dress.

Forage-master. See WAGON-MASTER.

Foragers. A detachment of soldiers who forage or collect stores for an army.

Foraging. Is properly the collection of forage or other supplies systematically in towns or villages, or going with an escort to cut nourishment for horses in fields. Such operations frequently lead to engagements with the enemy. Foraging parties are furnished with reaping-hooks and cords. The men promptly dismount, make bundles with which they load their horses, and are prepared for anything that may follow. The word foraging is sometimes inaccurately used for marauding.

Forbach. A small town of France, in the department of the Moselle, now a part of German Lorraine. It was occupied by the Prussians, January 10, 1814. During the Franco-Prussian war it was taken by the German generals Von Goeben and Von Steinmetz, after a fierce contest, in which the French were defeated and compelled to retreat, August 6, 1870.

Forcat. A rest for a musket in ancient times.

Force. In its military application, signifies an army of all branches,—artillery, cavalry, and infantry. It is sometimes used in the plural number, but with the same signification; as, "commander of the forces;" and occasionally we find the word used in another sense, thus, "He is in great force." To force, in broadsword exercise, is to break an adversary's sword-guard, and either wound him or expose him to a wound.

Force. To obtain or win by strength; to take by violence or struggle; specifically, to capture by assault; to storm, as a fortress. Also to impel, drive, wrest, extort, get, etc., by main strength or violence; with a following adverb, as *along, away, from, into, through, out, etc.*

Force. To provide with forces; to reinforce; to strengthen by soldiers; to garrison.

Force of Gravity. The force by virtue of which all terrestrial bodies fall to the earth when unsupported. As a terrestrial force it may be considered constant for the same place, but as it is practically the resultant of the earth's attraction and the centrifugal force arising from its rotation, and as the earth is neither homogeneous nor a perfect sphere, it will vary slightly with the latitude, being greatest at the poles and least on the equator, and it will also vary in an insignificant degree from place to place in the same latitude. Gravity is distinguished in dynamics as the only constant force with which we have to do. It differs also from all others in this, that its measure is independent of mass. Other forces are measured by the product of the mass moved into the velocity imparted in the unit of time; but as gravity impresses the same velocity upon all masses, great or small, mass is properly omitted in its measure. The velocity impressed by it during each second of its action, or the *acceleration*, is about 32.1808 feet in latitude 45°, about

32.0977 at the equator, and 32.2629 at the poles. This number in gunnery is indicated by the algebraic symbol *g*. Its exact value at any place is best determined by the length of the simple second's pendulum at that place. The value for *g* for bodies falling in the air is very nearly true for dense substances presenting small surfaces, when the fall is limited by a few seconds. For the ordinary time of flight of projectiles it can be used without material error.

Force, To. To force an enemy to give battle, is to render the situation of an enemy so hazardous, that whether he attempts to quit his position, or endeavors to keep it, his capture or destruction must be equally inevitable. In either of such desperate cases, a bold and determined general will not wait to be attacked, but resolutely advance and give battle, especially if circumstances should combine to deprive him of the means of honorable capitulation. To *force* a passage, is to oblige your enemy to retire from his fastnesses, and to open a way into the country which he had occupied. This may be done either by *coup de main*, or renewal of assaults. In either case, the advancing body should be well supported and its flanks be secured with the most jealous attention.

Forced. Exerted to the utmost; urged; hence, strained, urged to excessive or unnatural action; as, a forced march.

Forces, Effective. All the efficient parts of an army that may be brought into action are called effective, and generally consist of artillery, cavalry, and infantry, with their necessary appendages, such as hospital staff, wagon-train, etc. Effective forces of a country; all the disposable strength, vigor, and activity of any armed proportion of native or territorial population. The navy of a country must be looked upon as part of the effective force of the country, to which is added the marines.

Forcing. The operation of making a bullet take the grooves of a rifle. This was formerly effected in various ways, by flattening the bullet in its seat with the ramrod, by using a patch, etc. (See PROJECTILES, BULLETS.) The term is not much used at the present day.

Ford. A place in a river or other water where it may be passed by man or beast on foot, or by wading. A ford should not be deeper than 3 feet for infantry, 4 feet for cavalry, and 2½ feet for artillery. These limits must be lessened if the stream be swift. A bottom of large stones is bad for cavalry and impracticable for carriages; gravel is the best bottom; a sandy bottom, though good at first, is apt to deepen when many troops pass.

Ford. To pass or cross, as a river or other water, by treading or walking on the bottom; to pass through by wading; to wade through.

Fordable. Capable of being waded or passed through on foot, as water.

Fording. The act of passing over a ford.
Fore. In advance; at the front; in the part that precedes or goes first.

Fore-arm. To arm or prepare for attack or resistance before the time of need.

Fore-fence. Defense in front. The term is now obsolete.

Forefront. The foremost part or place; as, the forefront of the battle.

Foreign. Not of one's country; not native; alien; from abroad.

Foreign Enlistment Act. 59 Geo. III. c. 69 (1819), forbids British subjects to enter the service of a foreign state, without license from the king or privy council, and also the fitting out or equipping ships for any foreign power to be employed against any power with which the British government is at peace. In 1606 Englishmen were forbidden to enter foreign service without taking an oath not to be reconciled to the pope. The act was suspended in 1835 on behalf of the British Legion.

Foreign Legion. Foreigners have frequently been employed as auxiliaries in the pay of the British government. An act (18 & 19 Vict. c. 2) for the formation of a Foreign Legion as a contingent in the Russian war (1855) was passed December 23, 1854. On the peace, in 1856, many of the Foreign Legion were sent to the Cape of Good Hope.

Foreign Service. In a general sense, means every service but home. In a more confined and native acceptation of the term, it signifies any service done out of the United States or the depending territories.

Foreland. In fortification, a piece of ground between the wall of a place and the moat.

Fore Rank. The first rank; the front.

Fore-spurrer. One who rode before. This term is now obsolete.

Foreward. The van; the front.

Forfeit. To render oneself by misdeeds liable to be deprived of; as, a soldier forfeits pay by sentence of court-martial for offenses committed.

Forge. Every field-battery is provided with a forge. It consists, besides the limber, of a frame-work, on which are fixed the bellows, fire-place, etc. Behind the bellows is placed the coal-box, which has to be removed before the bellows can be put in position. In the limber-box are placed the smith's tools, horseshoes, nails, and spare parts (iron) of carriages, harness, etc. The weight of the forge equipped for field-service is 3888 pounds for the battery, and 3370 pounds for the reserve. A forge for red-hot shot is a place where the balls are made red-hot before they are fired off. It is built about 5 or 6 feet below the surface of the ground, of strong brick-work, and an iron grate, upon which the balls are laid, with a very large fire under them.

Forlorn Hope. Officers and soldiers who generally volunteer for enterprises of great danger, such as leading the attack when storming a fortress, etc. Formerly it was

applied to the advanced guard before the enemy, even on a march. See **ENFANS PERDUS**.

Form. To form, in a general acceptation of the term, is to assume or produce any shape or figure, extent or depth of line or column, by means of prescribed rules in military movements or dispositions. To *form on* is to advance forward, so as to connect yourself with any given object of formation, and to lengthen the line.

Formation of Troops. The term formation is applied to that particular arrangement of the troops composing any unit, when this latter is ready for battle, or is prepared to execute a movement.

That portion of the formation on the side towards the enemy is called the *front*; the side opposite to the front is termed the *rear*; the lateral extremities are called *flanks*.

Any row of soldiers placed parallel to the front is called a *rank*; a row perpendicular to the front is called a *file*; the number of ranks measures the *depth* of the formation.

Troops drawn up so as to show an extended front, with slight depth, are said to be *deployed*; when the depth is considerable and the front comparatively small, they are said to be in *ployed* formation. See **ORDER, ORDER OF BATTLE, CONCAVE, ORDER OF BATTLE, CONVEX**.

Formers. Are round pieces of wood that are fitted to the diameter of the bore of a gun, round which the cartridge-paper, parchment, lead, or cotton is rolled before it is served.

Formigny. A village of France, in the department of Calvados, 10 miles northwest from Bayeux, where a battle was fought in 1460, between the French and English, the latter being defeated, and thereby forced to abandon Normandy.

Formosa. An island in the China Sea belonging to China. The Dutch became masters of it in 1632, but they were expelled by the pirate Coxinga, whose successors ruled it till 1688. It was invaded by the Japanese in 1874, to avenge the murder of some of their people.

Fornova (Parma, Italy). Near here Charles VIII. of France defeated the Italians, July 6, 1496.

Fort. Technically applied to an inclosed work of the higher class of field fortification; but the word is often used in military works much more loosely.

Fort Adams. A fortification situated on Brenton's Point, 1 mile west of the town of Newport, R. I., and commanding the entrance to the harbor. It was first garrisoned in 1841, and is established on the old fort which formerly occupied the position.

Fort Adjutant. In the British service, is an officer holding an appointment in a fortress,—where the garrison is often composed of drafts from different corps,—analogous to that of adjutant in a regiment. He is responsible to the commandant for the internal discipline, and the assignment of the neces-

sary duties to particular corps. Fort adjutants are staff-officers, and receive additional pay.

Fort Ann. A village of Washington Co., N. Y., on the Champlain Canal. A fortification, from which the place derives its name, was erected here during the wars with the French, in 1756. It was captured from the Americans about 1779.

Fort Barrancas. Situated on the north side of the entrance to Pensacola harbor, and has been occupied since October 24, 1820, when it was ceded by Spain to the United States. During the civil war it was captured by the Confederates (1861), and held by them until the following year.

Fort Caswell. An old brick work situated on Oak Island, at the mouth of Cape Fear River, North Carolina. On the outbreak of civil war it fell into the hands of the Confederates, who held it until the fall of Fort Fisher, in 1865.

Fort Columbus. See GOVERNOR'S ISLAND.

Fort Constitution. Is situated in Portsmouth harbor, N. H. It was established in 1806, and garrisoned by U. S. troops; but as early as 1806 the post was occupied. It consisted of an earthwork, built by the English government, and named William and Mary. A new work was commenced in 1863, having its foundation outside the old one.

Fort Covington. A village of Franklin Co., N. Y., on Salmon River, about 18 miles northwest of Malone. Here the American army suffered greatly during the winter of 1813-14.

Fort Delaware. A casemated fort on Pea Patch Island, in the Delaware River. It was a military prison during the civil war.

Fort Donelson. See DONELSON, FORT.

Fort Duquesne. See PITTSBURG.

Fort Erie. In Upper Canada; this fort was taken by the American general Browne, June 3, 1814. After several conflicts it was evacuated by the Americans, November 5, 1814.

Fort Fairfield. A village of Aroostook Co., Me. It contains a barrack, and is chiefly interesting from its having been a military post during our trouble with England in 1839.

Fort Fisher. A strong earthwork on the east side of Cape Fear River, about 20 miles south of Wilmington, N. C., and one of the principal defenses of that port. On December 24-25, 1864, the forces of Gen. Butler attempted to take it, but unsuccessfully; but on January 15, 1865, it was taken by storm by the Union army and navy, and over 2000 Confederate prisoners and 169 pieces of artillery were captured.

Fort George. A fortification in Inverness, Scotland, on the extremity of a low peninsula, projecting upwards of a mile into the Moray Firth. It has barracks for about 8000 men, and is the most complete fortification in Great Britain.

Fort George. See FORT WILLIAM HENRY.

Fort Griswold. An old Revolutionary fort near New London, Conn. The traitor Arnold massacred the garrison and burned the town in 1781.

Fort Hamilton. A strong fortification on the Narrows, defending the entrance of New York harbor.

Fort Independence. A fortification on Castle Island, in Boston harbor, Mass., which forms one of the defenses of the harbor. It was commenced in 1838, and completed in 1851.

Fort Jackson. A fort on the right bank of the Mississippi River, about 80 miles below New Orleans. On April 18, 1862, Admiral Farragut, then captain, commenced the bombardment of this fort and Fort St. Philip on the opposite bank of the river, and after six days' and nights' continuous firing, succeeded in passing with his fleet; and destroying the Confederate flotilla, the forts surrendered.

Fort La Fayette. A fort surrounded by water in the Narrows, at the entrance of New York harbor, immediately in front of Fort Hamilton. It was used during the civil war as a prison. This fort was recently destroyed by fire.

Fort Lee. A village of Bergen Co., N. J., on the Hudson River, at the foot of the Palisades. It was once a noted military post, and was captured by the British in 1776.

Fort McAllister. See MCALLISTER, FORT.

Fort McHenry. Is situated on Whetstone Point, a peninsula formed by the junction of the northwest branch of the Patapsco with the main river, about 8 miles from Baltimore, Md. The site was first occupied as a military post by the erection of a water-battery in 1776 for the defense of the town. In 1794 the fort was repaired, and a star or pentagon fort of brick-work added, when it was ceded to the United States and called by its present name.

Fort Mackinaw. See MACKINAW.

Fort Macon. Situated on the eastern extremity of Bogue Banks, near Beaufort harbor, N. C. It was surrendered to Gen. Burnside after a siege of about two weeks, in which he was aided by the blockading gunboats, April 25, 1862.

Fort-Major. A commandant of a fort in the absence of the governor. Officers employed as fort-majors, if under the rank of captains, take rank and precedence as the junior captains in the garrisons in which they are serving. He is a staff-officer.

Fort Marion. At St. Augustine, Fla.; was erected by the Spaniards more than 100 years ago, and formerly called the Castle of St. Mark.

Fort Mifflin. Is one of the old Revolutionary fortresses, situated near the junction of the Schuylkill and Delaware Rivers. It is one of the defenses of the city of Philadelphia.

Fort Monroe. A massive work of granite surrounded by a moat, situated at Old Point Comfort, Elizabeth City Co., Va. It

was established in 1818, in which year a reservation of about 250 acres for defensive purposes was here ceded to the United States by the State of Virginia. It is the largest military work in the United States, and during the civil war was an important naval rendezvous. The artillery school of the army is established at this post.

Fort Morgan. Situated at the entrance to anchorage in Mobile Bay, on the site of the old Fort Bowyer, which bore such an important part in the war of 1812-15, the Americans under Maj. Lawrence having here repulsed with great loss a combined land and sea attack of the British and their Indian allies, September 15, 1814.

Fort Moultrie. One of the defenses of Charleston harbor, S. C., on the west shore of Sullivan's Island, about 5 miles east-southeast of Charleston. It received its name in honor of Col. Moultrie, an officer of the Revolution, who here successfully resisted an attack from 9 British vessels in 1776. It was abandoned by the Federal troops in December, 1860, and was seized by the Confederates, who fired from it some of the first shots of the civil war. It has been garrisoned by U. S. troops since the close of the war.

Fort Niagara. On the right bank of the Niagara River, in the county of the same name, in the State of New York. It was established by La Salle in 1678; captured by the British under Sir William Johnson in 1759; surrendered to and occupied by the United States in 1796. In the war of 1812-15 it was but feebly garrisoned, and on December 19, 1813, a force of 1200 British crossed the river, and took it by surprise, killing 65 of the garrison.

Fort Ninety-Six. A stockaded fort which was situated in Abbeville District, 6 miles from the Saluda River. It received its name from being 96 miles from the frontier fort Prince George, on the Keowee River. This fort was the scene of many exciting events during the Revolutionary war. With a garrison of about 350 Tories under Lieut.-Col. John Cruger, it was besieged by the Americans under Gen. Greene for twenty-seven days, May-June, 1781; but just as his efforts were about to be crowned with success, Gen. Greene was obliged to retreat, to avoid falling into the hands of a vastly superior British force, which was coming to relieve the beleaguered garrison.

Fort Ontario. An inclosed work on the west bank of Oswego River, built in 1755, on the site of Fort Oswego. Here were the scenes of many stirring events in the wars between France and England, and of a skirmish in 1814.

Fort Pickens. A fort on Santa Rosa Island, Pensacola harbor, Fla. Lieut. A. J. Slemmer in January, 1861, after evacuating Fort Barrancas, held this post against the Confederates until reinforced.

Fort Pillow. In Lauderdale Co., Tenn., by land about 40 miles north of Memphis.

It was erected by the Confederates during the civil war. It was bombarded by Federal gunboats, and evacuated by the Confederates, June 4, 1862. On April 12, 1864, it was captured by the Confederates, when took place an indiscriminate slaughter of the negro troops garrisoned there.

Fort Plain. A Revolutionary fortress, which was situated near the junction of Osquaga Creek and the Mohawk, in Montgomery Co., N. Y. For a while it was an important fortress, affording protection to the people in the neighborhood, and forming a key to the communication with the Schoharie, Cherry Valley, and Unadilla settlements. On August 21, 1780, a party of 500 Tories and Indians marched up within cannon-shot of this fort, burned 53 dwellings and as many barns, destroyed the crops, and carried off everything of value. Sixteen of the inhabitants were slain, and between 50 and 60 persons, chiefly women and children, were taken prisoners.

Fort Pulaski. Located on Cockspur Island, at the head of Tybee Roads, commanding both channels of the Savannah River. It was named after a Polish patriot who fought in the American war of the Revolution, and died in consequence of wounds received in the attack on Savannah, October, 1779. During the civil war, being in possession of the Confederates, it surrendered to the Federals under Gen. Hunter, April 10, 1862.

Fort Schuyler. An old Revolutionary fort, which occupied the site of old Fort Stanwix, and was built on the present site of Rome, N. Y. It is celebrated in early American history as among the strongest forts on the then northern frontier.

Fort St. David. A town of Hindostan, on the sea-coast of the Carnatic, situated on the river Tripapalore. After the capture of Madras by the French in 1746, the English were besieged here without success; and from this period it continued the head of the English settlements till 1758, when it was taken by Lally, after a short siege, and the fortifications were destroyed.

Fort St. Philip. Situated on the left or north bank of the Mississippi River, nearly opposite Fort Jackson (which see).

Fort Sumter. A fort celebrated in the annals of the civil war. It is situated on a small island in Charleston harbor, S. C., between 3 and 4 miles from the city. April 12-13, 1861, it was bombarded and captured by the Confederates, who thus inaugurated the civil war. It was reduced to a ruinous condition during the siege of Charleston, in the summer of 1863, but was held by the Confederates until February 18, 1865.

Fort Taylor. An inclosed casemated pentagonal brick-work in Key West harbor, Fla., commenced 1845.

Fort Trumbull. Situated in the harbor of New London, Conn., on the west side of the Thames River. It is an inclosed work, and was commenced in 1839.

Fort Wadsworth. A permanent fortification on Staten Island, west of the Narrows, commanding the entrance on that side of New York harbor, distant from Fort Hamilton 1 mile.

Fort Wagner. See MORRIS ISLAND.

Fort Washington. A strong earthwork erected during the Revolutionary war upon the highest eminence on Manhattan Island, at a point now between 181st and 186th Streets, New York City. During the Revolutionary war it fell into the hands of the English, and nearly 8000 Americans were captured.

Fort Wayne. A U. S. fortification in Wayne Co., Mich., just below Detroit. It is intended to command the navigation of the Detroit River.

Fort William Henry. A Revolutionary fort near the head of Lake George, N. Y. During the wars of the colonies it was captured by the French and Indians in 1757.

Fort Winthrop. One of the defenses of Boston harbor, Mass., on Governor's Island, the former site of old Fort Warren. It is a small inclosed quadrangular work, with exterior open barbette batteries; commenced 1844.

Fort Wood. On Bedloe's Island, New York harbor, and in the city of New York, $1\frac{1}{2}$ miles southwest of the Battery. It was erected in 1841, and mounted 71 guns.

Fort Wool. A large unfinished inclosed casemated work or "rip-rap" foundation, formerly called Fort Calhoun, designed for the defense of Hampton Roads, Va.

Fortalice. A small outwork of a fortification; a fortillage;—called also *fortelace*.

Forted. Furnished with or guarded by forts; strengthened or defended, as by forts.

Forth. The ancient name for ford.

Forth Mountains. A range in the county of Wexford, Ireland, celebrated for being the rendezvous of 15,000 insurgents, who, in 1798, met here previous to the attack and capture of the town of Wexford.

Fortifiable. Capable of being fortified.

Fortification. Is the art of fortifying a town, or other place; or of putting it in such a posture of defense that every one of its parts defends, and is defended by some other parts, by means of ramparts, parapets, ditches, and other outworks; to the end that a small number of men within may be able to defend themselves for a considerable time against the assaults of a numerous army without; so that the enemy in attacking them must of necessity suffer great loss. There are various kinds of fortification, as *defensive* and *offensive*, *natural*, *artificial*, and *permanent*. *Defensive fortification* is the art of surrounding a place by works so disposed as to render it capable of a lasting defense against a besieging army. *Offensive fortification* comprehends the various works employed in conducting a siege. *Natural fortification* consists of those obstacles which nature affords to retard the progress of an enemy; such as woods, deep ravines, rocks, marshes, etc.

Artificial fortification is that which is raised by human ingenuity to aid the natural advantages of the ground, or supply its deficiencies. It is divided into *permanent* and *field fortification*. *Permanent fortification* is intended for the defense of towns, frontiers, and seaports, and is constructed of durable materials in time of peace; while *field fortification* being raised only for the temporary purpose of protecting troops in the field, its materials are those afforded by local circumstances and a limited time. For the principal parts of a regular fortress, see BANQUETTE, BASTION, BATAUDEAU, BERM, CAPONNIERE, CAVALIER, CITADEL, CORDON, COUNTERSCARP, COVERED WAY, CROWN-WORK, CUNETTE, CURTAIN, DITCH, EMBRASURES, ENCEINTE, ENVELOPE, EPAULEMENT, ESCARP, ESPLANADE, FACES, FLANK, FLÈCHE, OF ARROW, FRAISES, GLACIS, HORNWORK, LINES, LOOP-HOLES, LUNETTES and TENAILLONS, OUTWORKS, PALISADES, PARALLELS, or PLACES OF ARMS, PARAPET, RAMPS, RAMPART, RAVELIN, REDAN, REDOUBT, REVETMENT, SALLYPORTS, SLOPE INTERIOR, STAR FORT, TENAILLE, TERRE-PLEIN, TÊTES DE PONT, TRAVERSES, ZIGZAGS, or BOYAUX OF COMMUNICATION.

Fortification, Elementary. By some likewise called the theory of fortification, consists in tracing the plans and profiles of a fortification on paper, with scales and compasses; and examining the systems proposed by different authors, in order to discover their advantages and disadvantages.

Fortification, Front of. Consists of all the works constructed upon any one side of a regular polygon, whether placed within or without the exterior side. Some authors give a more limited sense to the term "front of fortification," by confining it to two half bastions joined by a curtain.

Fortification, Irregular. Is that in which, from the nature of the ground or other causes, the several works have not their due proportions according to rule; irregularity, however, does not necessarily imply weakness.

Fortification, Practical. Consists in forming a project of a fortification, according to the nature of the ground, and other necessary circumstances, to trace it on the ground, and to execute the project, together with all the military buildings, such as magazines, storehouses, barracks, bridges, etc.

Fortification, Regular. Is that in which the works are constructed on a regular polygon, and which has its corresponding parts equal to each other.

Fortification, Semi-permanent. During the civil war in America, 1861-65, it became necessary to construct strong fortifications for large cities in a short time. These circumstances gave rise to a new kind of fortification combining certain of the arrangements of both permanent and field works, which were called semi-permanent works.

Fortified. Strengthened and secured by forts.

Fortify. To strengthen and secure by forts, batteries, and other works of art; to render defensible against an attack by hostile forces, or capable of standing a siege.

Fortilage. A little fort; a block-house. Now obsolete.

Fortin. A little fort; a field fort; a sconce; a fortlet. Now obsolete.

Fortlet. A little fort.

Fortress. Is a fortified city or town, or any piece of ground so strongly fortified as to be capable of resisting an attack carried on against it, according to rule. Also, as a verb, to furnish with fortresses; to guard; to fortify.

Forward. A word of command given when troops are to resume their march after a temporary interruption.

Fosseway. One of the military Roman roads in England, so called from the ditches on both sides.

Fotheringay. A village of England, in Northamptonshire. Richard III. was born in the castle of this place, and Mary, queen of Scots, was imprisoned and executed here. James I. razed it to the ground after his accession to the throne.

Foucade, or Fougade. A small mine.

Fougasses. A description of small mines, constructed in front of the weakest parts of a fortification, as the salient angles and faces not defended by a cross-fire.

Fougass Shell. A row of loaded shells in a box divided into two compartments. The lower compartment is filled with powder. The box is only just covered by the earth. The fougass is fired by a fuze, electricity, or a tube which explodes when trodden upon.

Fougass, Stone. A sort of natural mortar formed by an excavation in the ground. At the bottom of the excavation is placed the charge in a box, over this comes a shield of wood, and over that again is placed about 5 cubic yards of stones, each of which should weigh not less than 1 pound. The excavation is in the shape of a frustrum of a cone, and makes an angle of about 40° with the horizon. The charge is about 80 pounds of powder, and the stones will fall over a parallelogram about 110 yards by 120 yards.

Fougeres. A town and parish of France, 28 miles northeast from Rennes. This town was the scene of many engagements between the English and the French, from the 11th to the 15th centuries.

Fougette (Fr.). An Indian sky-rocket, a species of firework which is frequently used by the Asiatics. It is made of the hollow tube of the bamboo, of a very large size, filled with the usual composition of rockets. The rod is only a part of the same bamboo, the greater part of which is cut away.

Foughard. Near Armagh, Northern Ireland. Here Edward, brother of Robert Bruce, after invading Ireland in 1815, was defeated by Sir John Bermingham in 1818. Bruce was killed by Roger de Maupia, a burgess of Dundalk.

Fouiller (Fr.). To search. In a military

sense, it signifies to detach small bodies of infantry round the flanks of a column that is marching through a wood, for the purpose of discovering an ambuscade, and of giving timely notice that it may be avoided. The same precaution is necessary when a body of men advance towards or enter a village.

Fouling. The action of gunpowder in dirtying the bore of a gun. Cannon for this and other reasons are sponged after each round.

Foundation. In military architecture, is that part of a building which is underground, or the mass of stone, brick, etc., which supports a building, or upon which the walls of a superstructure are raised; or it is the coffer or bed dug below the level of the ground to raise a building upon.

Founder. A person who casts cannon, etc.

Foundry. In military matters, the art of casting all kinds of ordnance, such as cannon, mortars, etc.

Foundry. A place for casting all kinds of ordnance; a foundry.

Four. A place of confinement in Paris to which vagabonds and persons who could not give any satisfactory account of themselves were committed; and when once shut up had their names registered, and were enlisted for the old French government. These Fours added annually 2000 men at least to the king's regular army; by which means the capital was relieved of a multitude of thieves, pickpockets, etc.

Fourage (Fr.). Forage; in the artillery, it is used figuratively to signify hay, straw, or anything else of vegetable growth, which is used to ram into the bore of a cannon for the purpose of cleansing it.

Fourager (Fr.). To forage, or look about for provender and provisions. It likewise means among the French to ravage, desolate, pillage, and waste a country for the purpose of throwing the inhabitants into disorder. The word is derived from *foras agere*, or to seek for forage in the field.

Fourier (Fr.). A quartermaster belonging to a cavalry or infantry regiment. In France there were *fouriers-majors* who composed a part of the cavalry staff. *Sergeant-fourier* and *corporal-fourier* answer to our quartermaster-sergeant.

Fourniment (Fr.). A horn formerly used, which held about 1 pound of gunpowder to prime cannon. It was likewise used by cavalry and infantry soldiers, who slung it across their shoulders. The artillerists kept it in a belt.

Fowley. A decayed seaport town of England, in the county of Cornwall, at the mouth of a small river of the same name. It became famous in the old French wars, and in 1847 sent 87 tall ships to the siege of Calais. It was burned by the French in 1457.

Fowling-piece. A term sometimes applied to shot-guns of large caliber and great power, for shooting ducks, geese, and other large birds.

Fox. The old English broadsword.

Fox Indians. A tribe of American aborigines of the Algonkin stock, associated with the Sacs. They formerly dwelt in the southern part of Iowa, but now occupy lands in Indian Territory. See INDIANS AND THEIR AGENCIES.

Fraisers (Fr.). To plait, knead, or drill. In a military sense to fraise or fence; as, *fraiser un battalion*, is to fraise or fence all the infantrymen with pikes, to oppose the irruption of cavalry, should it charge them in a plain. At present it means to secure a battalion by opposing bayonets obliquely forward, or crossways in such a manner as to render it impossible for horsemen to act against it.

Fraises. Rows of palisades planted horizontally, or nearly so, as at the edge of a ditch, or on the steep exterior of a parapet. Fraises are generally 7 or 8 feet long, and about 5 inches thick. When an army intrenches itself, the parapets of the retrenchment are often fraised in the parts exposed to an attack. To *fraise a battalion* is to line or cover it every way with bayonets, that it may withstand the shock of a body of horse.

France. A country of Western Europe, which was known to the Romans by the name of Gaul (which see). In the decline of their power it was conquered by the Franks, a people of Germany, then inhabiting Franconia, where they became known about 240. These invaders gave the name to the kingdom (*Franken-ric*, Frank's Kingdom); but the Gauls, being by far the more numerous, are the real ancestors of the modern French. For details of important events in France, see separate articles.

Franches (Fr.). *Les compagnies franches*, free companies, were bodies of men detached and separated from the rest of the army, having each a chief, or commandant. They consisted chiefly of dragoons, hussars, etc., and their peculiar duty was to make irruptions into an enemy's country. They may not improperly be called land-pirates, as their chief occupation was to harass and plunder the enemy and his adherents, in whatever manner they could, without paying any regard to military forms. The persons who composed these corps were termed partisans. They always accompanied the main army in time of war, and were distributed among the different garrison towns in France during peace. They were common to every power in Europe; the Pandours and Hulans were of this description. They were the worst afflictions of war; and generally as fatal to their friends as to their enemies.

Francisque (Fr.). A battle-axe; an ancient weapon formed like an axe, used principally by the Franks.

Franco-Prussian War. The origin of this dreadful series of sanguinary conflicts is ascribed to the jealousy of the emperor of the French of the greatly increased power of Prussia, in consequence of the successful

issue of the war with Denmark in 1864, and more especially of that with Austria in 1866. By these events the German Confederation was annulled, and the North German Confederation established under the supremacy of the king of Prussia, whose territories were also enlarged by the annexation of Hanover, Hesse-Cassel, Nassau, Frankfort, and other provinces. This great augmentation of the power of Prussia was mainly due to the policy of Count Bismarck-Schönhausen, prime minister. In March, 1857, a dispute arose through the emperor's proposals for the purchase of Luxemburg of the king of Holland, which was strongly opposed by Prussia, but the affair was eventually settled, by a conference of the representatives of the great powers declaring Luxemburg neutral. Both governments, however, had prepared for the impending struggle, and the crisis came when Prince Leopold of Hohenzollern-Sigmaringen consented to become a candidate for the throne of Spain, about July 8, 1870. This was violently denounced by the French government, and eventually, after some negotiation and the intervention of Great Britain, the prince, with the consent of his sovereign, declined the proffered crown. This submission did not satisfy the French government and nation, and the demand for a guarantee against the repetition of such an acceptance irritated the Prussian government, and led to the termination of the negotiations. War was declared by the emperor July 15, 1870, and actually commenced about July 28. It did not end until January 27, 1871, and France was overrun by the victorious Prussians and their auxiliaries. On May 10, 1871, a definitive treaty of peace was concluded at Frankfort-on-the-Main, and on account of the rapid payment of the war expenses the last German soldier left French soil in July, 1878. For important battles and engagements during the war, see separate articles.

Franconia (Ger. *Franken*). An old duchy, afterwards a circle of the Germanic empire, between Upper Saxony, the Upper and Lower Rhine, Swabia, Bavaria, and Bohemia. Since 1806, it has been divided between the grand duchies of Baden and Hesse, and the kingdoms of Bavaria and Saxony.

Franc-Tireurs. Literally free-shooters, a name given to French soldiers during the Crimean war, who were stationed as sharpshooters. In the republican wars the name was also given to certain corps of light infantry. During the Franco-German war the name was also applied to a class of combatants among the French, who carried on a partisan warfare.

Frankfort-on-the-Main. A city of Prussia, province of Hesse-Nassau, to which it was annexed in 1866. It is situated on the right bank of the Main. Said to have been a free city in 1174, and suffered much by the wars of France. It was entered by the Prus-

sians, who exacted heavy supplies, July 16, 1866.

Frankfort-on-the-Oder. A well-built town of Prussia, capital of the province of Brandenburg, 48 miles southeast from Berlin. It suffered much from marauders in the Middle Ages, and in the Thirty Years' War. Near Frankfort, on August 12, 1759, Frederick of Prussia was defeated by the Russians and Austrians. See **CUNNERSDORF**.

Franklin. In the southern part of Tennessee, near the boundary-line of Alabama. A severe engagement took place here between the Union and Confederate forces under Gens. Schofield and Hood respectively, November 30, 1864.

Franks. A name given to a combination of the Northwestern German tribes about 240, which invaded Gaul and other parts of the empire with various success.

Fraser Gun. See **ORDNANCE**, **WOOLWICH GUN**.

Fraud. See **APPENDIX**, **ARTICLES OF WAR**, 60.

Fray. Affray; combat; duel; broil; contest.

Fraser's Farm, Battle of. See **GLENDALE**.

Fredericia. A fortified town of Denmark, in Jutland, on the Little Belt. It was besieged and taken by Prussia in 1864.

Fredericksburg. A city of Spottsylvania Co., Va., on the south bank of the Rappahannock River. On December 10, 1862, Gen. Burnside and the Federal army of the Potomac crossed the small deep river of the Rappahannock. On December 11, Fredericksburg was bombarded by the Federals and destroyed. On the 13th commenced a series of most desperate yet unsuccessful attacks on the Confederate works, defended by Gens. Lee, Jackson, Longstreet, and others. Gen. Hooker crossed the river with reserves, and joined in the conflict in vain. The Federal army recrossed the Rappahannock December 15 and 16. This battle was one of the severest of the war. Fredericksburg was the scene of several bloody battles during the civil war.

Frederickshald. A town of Norway, at the influx of the Tistedals-elf into the Ideford, 55 miles southeast from Christiania. Charles XII. of Sweden was killed here in the trenches before the fortress of Fredericksteen, on December 11, 1718.

Frederickshamm, or Hamina. A fortified town of Finland. The treaty which ceded Finland to Russia was signed here in 1809.

Freebooter. One who wanders about for plunder; a robber; a pillager; a plunderer.

Freebootery. The act, practice, or gains of a freebooter; freebooting.

Freebooting. Robbery; plunder; a pillaging. Also acting the freebooter; practicing the freebooter; robbing.

Freehold. A village, the capital of Monmouth Co., N. J. Near here was fought the battle of Monmouth, June 28, 1778.

Free-lances. Were roving companies of knights and men-at-arms, who, after the Crusades had ceased to give them employment, wandered from state to state, selling their services to any lord who was willing to purchase their aid in the perpetual feuds of the Middle Ages. They played their most prominent part in Italy, where they were known as *Condottieri* (which see).

Fregellæ (*Fregellanus*; now *Ceprano*). An ancient and important town of the Volsci, on the Liris, in Latium, conquered by the Romans, and colonized 328 B.C. It took part with the allies in the Social war, and was destroyed by Opimius.

Fregosa, or Fregose (in the plural *Fregosi*). A Genoese family, which in the 14th century gained distinction among the popular party, and by their rivalry with the Adorni occasioned frequent civil wars. *Fregoso* (Domenico), became doge of Genoa in 1870. He conquered the isle of Cyprus and was deposed in 1878. Pietro was a brother of the preceding; he commanded the armament which conquered Cyprus in 1878, and in 1898 was elected doge. Thomas was elected doge in 1415; being attacked by Alfonso of Aragon and the Duke of Milan, he made a brave resistance, and was forced to retire from Genoa in 1421. Pietro was elected in 1450, and for eight years maintained his power against Alfonso of Aragon and the Adorni; he was killed in an attempt to expel the French from Genoa in 1459. There were several other doges of this family in Genoa.

Fréjus. A town of France, in the department of the Var, 45 miles northeast from Toulon. It was here that Bonaparte landed on his return from Egypt in the autumn of 1799; and here also he disembarked after his escape from Elba in 1814.

French Fury, The. A name given, in history, to the attempt made by the Duke of Anjou to carry Antwerp by storm, January 17, 1583. The whole of his force was either killed or taken captive in less than an hour.

Frenchtown. In Canada; it was taken from the British by the American general Winchester, January 22, 1813, during the second war with the United States. It was retaken by the British forces under Gen. Proctor January 24, and the American commander and troops were made prisoners.

French Projectile. See **PROJECTILE**.

Fréteval. A town of France, in the department of Loir-et-Cher, 9 miles northeast from Vendôme. In 1194 the army of Philip Augustus was defeated here by the English.

Friction Plates. Plates used to check the recoil of guns. See **RECOIL** and **ELSWICK COMPRESSOR**.

Friction Primer. In gunnery, consists of a short tube of metal inserted into a hole near the top of a larger tube, and soldered in that position. The short tube is lined with a composition made by mixing together one part of chlorate of potassa and two of

sulphuret of antimony, formed into a paste with gum-water. A serrated wire passes through the short tube and hole opposite to it in the side of the long one, the open end of the short tube being compressed with nippers, and the wire at the end of the serrated part doubled under to prevent displacement. The other end of the wire is doubled and twisted by machinery. The long tube is filled with rifle-powder, its upper end being covered with shellac-varnish blackened with lamp-black, and its lower end closed with shoemaker's wax and dipped into varnish. One great advantage of the friction tube is that it gives an enemy at night no clue to the position of a piece as does the lighted port-fire or slow-match.

Friedland. A town of East Prussia, in the circle of Königsberg, on the Alle. This place is famous for being the scene of the battle gained by Napoleon I. over the Russians and Prussians on June 14, 1807, and which led to the peace of Tilsit.

Frill. Was an ornamental appendage to the shirt which officers and soldiers generally wore with regimentals. A small aperture was usually made at the top to admit the hook and eye of the uniform coat. Enlisted men generally wore frills detached from the coat.

Frisians. Were an ancient Teutonic race, dwelling together with the *Batavi*, the *Bructeri*, and the *Chauci*, in the extreme north-west of Germany, between the mouths of the Rhine and Ems. They became tributaries of Rome under Drusus, and for a time remained faithful to the Roman alliance; but, in 28, they were driven to hostilities by the oppression of their protectors, and although partially subdued, they again rose against the Romans under Civilis. They were defeated and compelled to embrace Christianity in 689 and 785.

Frisrutter. An instrument made of iron, and used for the purpose of blocking up a haven or a river. The beams through which the upright bars pass must be 12 feet in length, and the upright bars that go through the beam must be of that length so that when one of these iron *frisrutters* is let down into a haven or river, the perpendicular bars of this iron instrument shall be deep enough to reach at high water within 5 feet of the surface.

Friuli. An old province of Italy, belonging to Venice; made a duchy by Alboin the Lombard, when he established his kingdom about 570. It was conquered by Charlemagne; and Henri, a Frenchman, made duke, who was assassinated in 799. It was conquered by Venice in 1420.

Frock. In the British service, the undress regimental coat of the guards, artillery, and royal marines.

Frogged. A term used in regard to uniforms, and applied to stripes or workings of braid or lace, as ornaments, mostly on the breast, on the plain cloth of which a coat is made.

Fronde (Fr.). A sling. This weapon was used in France by the Huguenots at Sancerre, as late as the year 1572, in order to save their powder. There were two kinds one which was used in throwing a stone from the arm, and the other that was fixed to a lever, and was so contrived that a large quantity of stones might be thrown out of a machine, either from a camp into a besieged town, or from a town into the enemy's camp. This machine has been used since the invention of cannon. The fronde or sling was used by the Romans on three different occasions, viz.: when they sent their light-armed men, called *velites*, forward to skirmish before a general engagement; when they wished to drive the enemy from under the walls of a town which they were preparing to storm, and finally to harass and wound the men in the enemy's works. This weapon, in fact, together with the bow and arrow, may be numbered among the primitive arms of mankind.

Fronde, Civil Wars of the. These occurred in France in the minority of Louis XIV. (1648-53), during the government of the queen, Anne of Austria, and Cardinal Mazarin, between the followers of the court and the nobility, and the Parliament and the citizens. The latter were called *Frondeurs* (*slingers*), it is said, from an incident in a street quarrel.

Front. A word of command signifying that the men are to face to their proper front; also to cast their eyes to the front after dressing.

Front. The foremost rank of a battalion, squadron, or any other body of men. The *front of a gun* is the direction in which the muzzle points; but when a field-piece is limbered, its front is the direction in which the pole points. The *front of a work* or fortification is the side it presents to the enemy. The *front of an army*, except in retreating, is the side towards the enemy. A column is said to be *right in front* when it is formed by facing or wheeling to the right.

Front, Bastioned. A curtain connecting two half bastions.

Front of Operations. See STRATEGY.

Frontal. A front piece; something worn on the forehead or face; or the metal face-guard of a soldier.

Fronted. Formed with a front; as, fronted brigades.

Frontier. That part of a country which fronts or faces another country; the marches; the border, confines, or extreme part of a country, bordering on another country; hence, a fortified or guarded position. Also, lying on the exterior part; as, a frontier town. Acquired on a frontier; as, frontier experience.

Frontiera. A town of Portugal, in the province of Alemtejo, 15 miles from Estremoz. The Spaniards were defeated here in 1663 by the Portuguese under Schomberg.

Froschweiler. See WORTH.

Frumentarius. A Roman soldier, whose

duty was to bring supplies of provisions to the army, and the earliest notice of all hostile movements. They were also, under the Roman empire, officers who acted as spies in the provinces, and reported to the emperor whatever seemed worthy of note. They appear to have derived this appellation from their gathering news in the same way that the *Frumentarii* or purveyors collected corn.

Fuel. The matter or aliment of fire; anything capable of ignition. There is a certain allowance of fuel made by government to regiments and companies. Officers in the U. S. army, at the present time, buy their fuel; in other countries it is furnished.

Fuente-la-Higuera. A city of Spain, in the province of Valencia. At this place Jourdan, Soult, and Suchet, after the rout of Salamanca, met with their retreating forces, and held a council how best to get back into France, when Ballesteros, by refusing to obey Wellington's order, opened the way for them to Madrid, in October, 1812.

Fuechterabia. A very ancient city of Spain, in the province of Guipuzcoa. The Prince of Condé was repulsed here by the admiral of Castile, 1688. In 1794 the French completely dismantled the place.

Fuentes de Onore. A small town of Spain, 16 miles from Ciudad Rodrigo. It was the scene of some sharp fighting in May, 1811, between the French and the British.

Fugitive. One who flees from his station or duty; a deserter; one who flees from danger. One who has fled or deserted and taken refuge under another power, or one who has fled from punishment.

Fugleman (an incorrect method of pronouncing *flugelman*). A well-drilled intelligent soldier advanced in front of the line, to give the time in the manual and platoon exercises. The word *flugel* is derived from the Germans, and signifies a wing; the man having been originally posted on the right wing.

Fulcrum. A cast-iron post at the breech of large cannon used as a support for an iron bar in giving elevations; called also *ratchet post*.

Full Charges. The charges of powder required in actual service.

Full Pay. The full amount of an officer's regimental pay. When an officer receives that he is said to be on full pay.

Full Pay, Retired. In the British service, an officer of 30 years' full pay is permitted to retire on the full pay of his regimental rank, with a rank one step higher than that which he holds by brevet or otherwise.

Full Sap. See **SAP**.

Full Uniform. See **DRESS UNIFORM**.

Fulminate. A salt of fulminic acid. Fulminate of mercury is the most useful. It explodes readily by percussion, by a heat of 367° Fahr., when touched with strong sulphuric or nitric acid, by sparks from flint and steel and by the electric spark. It is

used for percussion-caps, primers, fuzes, etc. From its peculiar power to produce detonations it is the detonating agent for modern blasting powders, containing nitro-glycerine, also, for gun-cotton. *Detonating caps*, or *exploders*, are copper caps containing from 8 to 25 grains of the fulminate. In ordinary blasting, where the tube fuze is used, the cap is placed on the end of the fuze and crimped around it. The cap is then buried a short distance in the blasting charge, or cartridge. See **EXPLOSIVES**.

Fumigation. To correct and purify an infectious or confined atmosphere, such as is often found in transports, fumigations are necessary. The materials recommended for the purpose are brimstone with saw-dust; or nitre with vitriolic acid; or common salt with the same acid.

Fund. There are several kinds of funds in the U. S. service, viz.: post fund, which is constituted by the troops baking their own bread and thereby saving 88½ per cent., the difference between bread and flour; the post trader also pays an assessment of 10 cents a month for every officer and soldier in the garrison, which is carried to the credit of the fund. This fund is used to defray expenses of the post bakery, garden, school, library and reading-room, chapel, printing-press, etc. Fifty per cent. of the post fund, after deducting expenses of the bakery, is set aside and transferred to the regimental treasurer; this constitutes a regimental fund, which is appropriated exclusively for the maintenance of a band, and, when a regiment does not have access to a post library, for the purchase of books and papers. The savings arising from an economical use of rations of the company (excepting the savings of flour) constitute the company fund, which is kept in the hands of the company commander, and disbursed by him *exclusively for the benefit of the enlisted men of the company*, as follows: For enlisted men's mess, for garden seeds and utensils, for purchase of books, papers, etc., when the company does not have access to a post library or reading-room, and for such exercise and amusements as may be, in the judgment of the commanding officer, for the benefit or comfort of the enlisted men of the company.

Funeral Honors. If an officer dies when on duty with his regiment, or engaged on staff employ, he is buried with military honors. His hat, epaulettes, and sword are placed upon the coffin, soldiers support it, and officers bear the pall; the troops march at a slow and solemn pace, with arms reversed; the drums are muffled; the band plays the dead march; and after the body has been lowered into the grave, a party of infantry, cavalry, or artillery, fire three volleys over it, and then retire. The strength of the funeral party, as it is called, depends upon the rank of the deceased. Artillery officers are sometimes honored by discharges of cannon. When a cavalry officer is buried his horse follows the *cortege*. When the fu-

neral of an officer entitled, when living, to a salute, takes place at or near a military post, minute-guns are fired while the remains are being borne to the place of interment; but the number of such guns is not to exceed that which the officer was entitled to as a salute when living. After the remains are deposited in the grave, a salute corresponding to the rank of the deceased officer will be fired,—three salvos of artillery, or three volleys of musketry.

In the event of a flag-officer of the navy, whether of the United States or of a foreign country, dying afloat, and the remains are brought ashore, minute-guns are fired from the ship while the body is being conveyed to the shore. If it be in the vicinity of a military post, the flag of the latter is displayed at half-staff, and minute-guns are fired from the post while the procession is moving from the landing-place. These minute-guns are not to exceed in number that which the officer was entitled to, as a salute, when living. During the funeral of a civil functionary entitled, when living, to a salute, the flag is displayed at half-staff, and minute-guns fired as before; but neither salutes nor salvos are fired after the remains are deposited in the grave. On the death of an officer at a military post, the flag is displayed at half-staff, and kept so, between the hours of reveille and retreat, until the last salvo or volley is fired over the grave, or if the remains are not interred at the post, until they are removed therefrom. Funeral honors are likewise accorded to enlisted men. During the funeral of an enlisted man, the flag is displayed at half-staff, and is hoisted to the top after the final volley or gun is fired. All military posts in sight, or within 6 miles of each other, display their flags at half-staff upon the occasion of either one doing so. The same rule is observed toward a vessel-of-war.

On all occasions where the flag is displayed at half-staff, it is *lowered* to that position from the top of the staff. It is afterwards *hoisted* to the top *before* being finally lowered.

Furl, To. In regard to military colors, is opposed to their exposure; and is used to express the act of folding them so as to be cased.

Furlough. The term is usually applied to the absence with leave of non-commissioned officers and other enlisted men, and may be granted at the discretion of the commanding officer.

Furlough. To furnish with a furlough; to grant leave of absence.

Furnace. In mining, signifies a hollow or excavation which is made in the earth and is charged with gunpowder, for the purpose of blowing up a rock, wall, or any part of a fortification.

Furnish. To provide; to equip; as, to furnish one with arms for defense.

Furniture. In a military sense, applies to certain articles which are allowed in bar-

racks, to which are added household utensils, etc. Horse furniture, are ornaments and embellishments which are adopted by military men when they are mounted for service or parade, consisting chiefly of housings, saddle-cloth, etc.

Furruckabad. A fortified town, and capital of a district of the same name, in the province of Agra, Hindostan, about a mile from the Ganges. Lord Lake defeated Holkar at this place in 1804.

Fürth. A town of Franconia, situated at the confluence of the Rezat and Pegnitz, 4 miles northwest from Nuremberg. In 1682 a battle was fought here between Gustavus Adolphus and Wallenstein, in which the latter had the advantage.

Fuse. See **Fuze**.

Fusil. A light musket; a steel which strikes fire out of a flint; a tinder-box; the piece of steel which covers the pan of a fire-arm.

Fusil à Chevalets. A species of fusils upon rests, which was recommended by Marshal Vauban, to be used at the commencement of a siege, about 50 or 100 toises in front of the glacis, at the entrances of narrow passages, etc.

Fusiliers. In the British service, were formerly soldiers armed with a lighter fusil or musket than the rest of the army; but at present all regiments of foot carry the same rifle. Fusilier is therefore simply a historical title borne by a few regiments. The royal regiment of Scotch Fusiliers was raised in 1678; the royal regiment of Welsh Fusiliers was raised in 1686, and another royal regiment of Welsh Fusiliers was raised in 1688-89. It is always presumed that these corps like the guards possess an *esprit de corps*, which is peculiar to themselves. The Fusilier regiments never had any ensigns, their junior officers ranked as second lieutenants, taking precedence of all ensigns, and the 7th or Royal Fusiliers have no second lieutenants, so that their junior officers rank with the rest of the army according to the date of their several commissions, as lieutenants. Fusilier regiments wear a bear-skin head-dress. Among the French when pikes were in use, each regiment had only 4 fusiliers, exclusive of 10 grenadiers, who carried the fusil or musket. Among the French there was a distinct regiment of fusiliers under the immediate command of the master of the ordnance.

Fusillade. A simultaneous discharge of fire-arms in a military exercise; as, a grand fusillade. To shoot down by a simultaneous discharge of fire-arms. "Fusillade them all."

Fusils à l'Eppe (Fr.). Fusils with long bayonets, shaped like a cut-and-thrust sword. These weapons were recommended as extremely useful in the rear rank of a battalion, or in detached bodies that are stationed for the defense of baggage, etc.

Fusils, Mousquets (Fr.). A sort of fusil which was invented by Marshal Vauban,

and which was so contrived that in case the flint did not strike fire, the powder might be inflamed by means of a small match which was fixed to the breech.

Fustuarium. In Roman antiquity, a method of inflicting capital punishment upon any soldier guilty of theft, desertion, or similar crimes. When the accused had been found guilty he was made to stand in front of the legion to which he belonged. One of the tribunes then touched him lightly with a stick, and all the soldiers immediately rushed upon the criminal and beat him to death with clubs (*fustes*). If he escaped—as he was allowed to do if he could, but which was rarely if ever possible—he was forbidden ever to return to his native country, and his nearest relatives were not allowed to receive him into their houses. This method of capital punishment continued to be enforced even under the empire.

Futteghur. A town of Hindostan, British district of Furruckabad, on the western bank of the Ganges. In the vicinity is the British military cantonment. Holkar, the Mahratta chief, appeared before the place in 1804, and was preparing for the assault of the fort, when the arrival of the British army under Lord Lake drove him into precipitate flight.

Fuyard (Fr.). A runaway; a coward. *Un corps fuyard*, a regiment that has been in the habit of running away.

Fuze. In gunnery, is a contrivance for igniting the bursting charge in a hollow projectile at any point of its flight. The simplest classification of fuzes is the *time fuze*, the *percussion fuze*, and the *concussion fuze*, which are usually defined as follows:

Fuze, CONCUSSION. Is a fuze that is operated by the shock of discharge, or the shock of impact, excluding direct percussion effects. It is especially applicable to hollow spherical projectiles. The usual difference between the concussion and percussion fuze is, that the former explodes no matter what point of the projectile strikes, whereas the latter requires the projectile to strike at or near the front end; but these are exceptions to the rule.

Fuze, PERCUSSION. As shown below, is a fuze that receives no flame from the charge in the gun, but at the moment of impact a flame is generated by means of fulminates, which produces the explosion of the charge in the shell. Most varieties of this fuze consist essentially of a brass or pewter *fuze-plug*, or case which contains an iron or steel *plunger* terminating in a nipple which carries a common percussion-cap; the *plunger* is held in its place at the lower end of the fuze-plug by a collar-screw, wire, or other device; when the projectile strikes the plunger breaks loose, and by its inertia is driven forward with such force as to explode the cap and ignite the charge. This form of fuze is used for rifle-shells.

Fuze, TIME. This fuze is composed of a case of paper, wood, or metal, inclosing a

column of burning composition ignited by the charge in the gun; it burns for a certain time; at the end of which the flame is communicated to the bursting charge of the projectile. This fuze is used for both shells and case-shot.

Fuze, Blasting. A fuze used to fire charges in mines and quarries. It consists usually of a flexible tube filled with a slow-burning composition. The tube is made of various materials, and is usually waterproof. In Beckford's fuze the composition is encased in flax, which is covered with gutta-percha, and wound with varnished tape. This fuze is used extensively in England.

Fuze-Composition. See **LABORATORY STORES.**

Fuze, Electric. A fuze ignited by the passage of an electric current. It is used for firing torpedoes, for the simultaneous discharge of guns and charges in mining. The principle used is the heating of the wire by the current at a point of resistance. The point of resistance is called the *bridge*. Being surrounded by a priming of powder or other explosive, its sudden heating causes ignition in the fuze. The *bridge* is made in various ways,—by connecting the current wires by a fine platinum wire; by passing the current through a chemical mixture rendered conducting by containing a salt of copper; also by filing the main wire nearly in two, and rubbing the cut with a lead-pencil.

Fuze-implements. Are the fuze-cutter, fuze-setter, fuze-mallet, fuze-saw, etc. See **IMPLEMENTS.**

Fuze, Safety. A name given to a blasting fuze filled with quick-burning composition, but sufficiently long to be ignited at a safe distance from the charge.

Fuze, Tape. So called from its shape. May be quick or slow burning.

Fuzes, Combination. Are fuzes combining the principles of the simple fuzes. The term is specially applied to *time-percussion* fuzes, which are so arranged as to burst either at the end of a certain time or upon striking the object. No very exact classification of fuzes has ever been made. If we consider all the operations necessary to the action of the fuze, only certain time fuzes can be considered simple. Concussion fuzes usually depend for their action upon some operation which takes place between the discharge and the time of impact, which bestows a character of sensitiveness which would, if existing at the time of loading, make them too dangerous to handle. Percussion fuzes, also, must have a similar supplementary operation, but this usually takes place at the time of discharge, or upon impact. It is by this means that the safety-pin, screw, or wire holding the plunger is removed or broken. For these reasons these fuzes are ordinarily *time-concussion* and *concussion-percussion*, respectively. A fuze, however, usually takes its name from the immediate cause of the explosion. If this is due

to the explosion of a fulminate by a direct blow, it is a percussion fuze. If the shock acts in a different way, it is called concussion. If the explosion takes place at the end of a given time, we have a time fuze. There are also fuzes which may be called *centrifugal-percussion*, *concussion-chemical*, *concussion-friction*, etc., examples of which will be given. It is readily seen that it is difficult to make a classification which will cover all the ingenious devices which have been invented.

The simplest time fuze is one which is ignited by the flame of discharge. In the U. S. field and siege service the paper fuze is used for rifle projectiles, both shells and case-shot, and in the field service the Bormann for spherical. For larger spherical projectiles, the paper case is inclosed in a hollow plug of wood, as in mortar-shells, and in a brass plug in the sea-coast service. In the latter the outer end of the plug is closed with a brass cap having a crooked chaume, to prevent the burning composition from being extinguished in striking water. In the U. S. service percussion fuzes are used only for rifle-shells. The fuze ordinarily employed is, strictly speaking, a *concussion-percussion*, since the safety wire must be ruptured by the shock of impact before the cap can be exploded.

The time fuze already described can be used in smooth-bore guns and in muzzle-loading rifles; but in breech-loading guns or guns without windage, the fuze composition cannot be ignited directly by the flame of discharge,—one of the strongest arguments in favor of muzzle-loaders. The time fuze for breech-loading guns is ignited by an interior contrivance, usually a plunger and cap; it is, consequently, a *percussion-time* fuze. Such is the nature of the *Armstrong time fuze* and the time fuzes used in Germany and Russia. Time fuzes are absolutely necessary to the successful use of case-shot or shrapnel, which must be burst in the air. The latest invention in time fuzes is the substitution of clock-work for the column of burning composition as a time-keeper,—a Yankee idea which has not yet received any official recognition, or been subjected to public test.

The Boxer fuze, used extensively in England, is a time fuze consisting of a column of composition driven in a wooden plug, which is closed at the lower end. In some forms of the fuze small longitudinal channels filled with rifle-powder communicate with the bursting charge. The time-scale is a row of holes in the side of the plug, one of which is bored through to the composition in setting the fuze. The flame communicates with the charge either through the side hole directly, or by the side channels downwards through the end of the plug. Two kinds of fuzes are used,—the *simple time fuze* for muzzle-loaders, and the *percussion-time* for breech-loaders.

The Spingard fuze, invented by Captain Spingard, of the Belgian service, is a good

example of a *time-concussion* fuze. It consists of a column of pure composition surrounding a hollow spindle of plaster of Paris. The composition is ignited by the flame of discharge, and burns away, leaving the spindle unsupported. When the projectile strikes, the part of the spindle above the unburned composition breaks off, and the flame fires the bursting charge through the hole in the stump. If the spindle fails to break, the charge is fired when the entire column has been consumed. This fuze is specially applicable to spherical projectiles.

The concussion fuze formerly used in Prussia was a *time-concussion-chemical* fuze. The burning of a column of composition left a glass tube containing sulphuric acid to be broken, by a lead ball, by the shock of impact. The acid coming in contact with a mixture of chlorate potash, sulphur, and white sugar, produced a flame which fired the bursting charge.

The *Beebe concussion fuze* for spherical projectiles, invented by Captain Beebe, U. S. Ordnance Corps, was a *concussion-friction* fuze. A contrivance equivalent to a friction-primer buried in the bursting-charge, and offering great resistance to motion in the powder, was fired by the sudden movement of an attached weight upon impact. The shock of discharge also played a part in detaching the fuze from the fuze-plug.

The *German percussion fuze*, now commonly used in Krupp guns, may be called *centrifugal-percussion*. The safety-pin passes through a hole from the outside of the shell. This pin is thrown out by the rotation of the shot, leaving but slight resistances to the motion of the plunger.

In the English *cap-percussion fuze* the corresponding safety-pin is pulled out by a tape by hand just before loading.

The *Pettman general service fuze*, used in England, is a *percussion* fuze of unusual form, equally applicable to spherical or oblong projectiles. It consists, essentially, of a hollow screw-plug containing a ball covered with detonating composition, which is freed from its bearings by the shock of discharge, and explodes the shell upon impact by striking the walls surrounding it. The detonating ball sometimes fails in breech-loading guns, the motion of the projectiles being too steady to shake it out of its seat. For this reason a *plain* ball, as it is called, is placed in the upper part of the fuze, and held between two disks. These separate upon discharge, and the ball is thrown outwards by the rotation opposite an annular groove in the lower plug or disk filled with fulminate, which is exploded upon impact, the lower plug being driven against the ball by its inertia. This fuze is, properly, a *concussion-percussion* fuze.

Fyroz, or Feroze (writen also *Feroze*, *Firoz*, *Firous*, *Feyrouz*, and *Firus*). A Persian word signifying "victorious," and forming the name of several ruling kings in Persia and Hindostan.

G.

Gabion. A kind of basket made of osier twigs, of a cylindrical form, having different dimensions, according to the purpose for which it is used. Filled with earth, these gabions serve in sieges to carry on the approaches under cover, when the assailants come near the fortification. Batteries are often made of gabions, which likewise serve for revetments in constructing parapets of loose earth.

Gabionage. Gabions when used for fortification.

Gabionnade. A work hastily thrown up; especially, one formed chiefly of gabions. A *parapet en gabionnade* is a parapet constructed of gabions.

Gabions, Corrugated Iron. Are gabions made of corrugated iron. For this purpose, the corrugated sheet should be 6 feet long, 33 inches wide, and of iron weighing three-quarters of a pound to the square foot.

The corrugations running transversely, the sheet is easily bent into a cylindrical form, in which it is retained by two clamps, the holes for which are punched near the corners of the sheet. The chief advantage claimed for the corrugated over the hoop gabion is, the readiness with which it can be put together in the field. It is also rather more portable, and stakes are dispensed with; but it is inferior to the hoop gabion in stiffness.

Gad. The point of a spear, or an arrow-head; a steel spike on the knuckle of a gauntlet.

Gadaru (Fr.). A very broad Turkish sabre.

Gadling. A spike or sharp-pointed boss on the knuckle of a gauntlet; a gad.

Gaeta. A strongly fortified maritime town of the Neapolitan province of Terra di Lavoro, 40 miles northwest from Naples. It is one of the strongest places in the kingdom, and its harbor is the same as it was in the time of the Romans. In 1799 and in 1806 it was taken by the French, and in 1849 Pope Pius IX. sought an asylum here. When Garibaldi took possession of Naples for Victor Emmanuel in September, 1860, Francis II., the last Bourbon king of Naples, took refuge in Gaeta, and remained until the town was taken by Gen. Cialdini, in February, 1861, after a siege of several weeks' duration.

Gætulia. An ancient country of Africa, situated south of Mauritania and Numidia; and embracing the western part of the desert of Sahara. Its inhabitants belonged to the great aboriginal Berber family of North and Northwestern Africa. They were a savage

and warlike race, and their first collision with the Romans was during the Jugurthine war, when they served as light horse in the army of the Numidian king. Cornelius Cossus Lentulus led a force against them, and for his success obtained a triumph and the surname of *Gætulicus*. The ancient Gætulians are believed to be represented in modern times by the Tuaricks.

Gaffies. The steel lever with which the ancients bent their cross-bows.

Gage. A challenge to combat; that is, a gauntlet, glove, cap, or the like, cast on the ground by the challenger, and taken up by the acceptor of the challenge.

Gages (Fr.). Wages. Among the French this term signified the fruits or compensations which were derived by individuals from appointments given by the crown, whether of a military, civil, or judicial nature, or for service done at sea or by land.

Gain. To conquer; to get the better; as, we gained the day, etc. To *gain ground*, implies to take up the ground which a retiring enemy vacates.

Gainé de Flamme (Fr.). A sort of linen sheath or cover, into which the staff of a flag or pendant is put.

Gainé de Pavillon (Fr.). A cloth or linen band, which is sewed across the flag, and through which the different ribbons are interlaced.

Gaines's Mill. In Hanover Co., Va., about 20 miles northeast of Richmond. Here, on June 27, 1862, was fought one of the "seven days' contests" between the Confederate forces under Gen. Lee and the Federals under Gen. McClellan, in which the latter were victorious.

Gain-pain. Bread-gainer; a term applied in the Middle Ages to the sword of a hired soldier.

Gaiters. A sort of cover for the leg, usually made of cloth, and are either long, as reaching to the knee, or short, as only reaching just above the ankle; the latter are termed half-gaiters, and are worn by infantry soldiers in Europe.

Galatia. An ancient province of Asia Minor; in the 8d century B.C., the Gauls under Brennus invaded Greece, crossed the Hellespont, and conquered Troas, 278; were checked by Attalus in a battle about 239; and then settled in what was called afterwards Gallogræcia and Galatia. The country was ravaged by Cn. Manlius, 189 B.C., and was finally annexed to the Roman empire, 25 B.C.

Galatone. A very ancient town in the south of Italy, in the province of Otranto,

about 9 miles northeast of Gallipoli. In the struggle between Joanna, queen of Naples, and Alfonso, Galatone having declared for the former, was besieged by Alfonso, and its ramparts destroyed.

Galea. Among the Romans, a light casque, head-piece, or morion, coming down to the shoulders, and commonly of brass; though Camillus, according to Plutarch, ordered those of his army to be of iron, as being the stronger metal.

Galeated. Covered, as with a helmet.

Galet (*Fr.*). A round stone thrown from a sling or bow.

Galicia. A province of Northwest Spain, was conquered by D. Junius Brutus, 186 B.C., and by the Vandals, 419, and was subdued by successive invaders.

Galicia. A kingdom or province of the Austrian empire, which formerly constituted a part of Poland. East Galicia was acquired by the emperor of Germany at the partition in 1772; and West Galicia at that of 1795. The latter was ceded to the grand duchy of Warsaw in 1809; but recovered by Austria in 1815.

Gall. To injure; to harass; to annoy; as, the troops were galled by the shot of an enemy.

Gallant. Noble in bearing or spirit; brave; high-spirited; courageous; heroic; magnanimous; as, a gallant youth; a gallant officer.

Gallantly. In a gallant manner, spirit or bearing; nobly; bravely; as, to fight gallantly; to defend a place gallantly.

Gallantry. Bravery; courageousness; heroism; intrepidity; as, the troops attacked the fort with great gallantry.

Gallas. A warlike race occupying the south and east of Abyssinia. They first appear in history in the 16th century, when they extended their conquests from the interior of Africa, laying waste by constant incursions the countries of Eastern Africa to the mountains of Abyssinia. Politically they do not form a single nation, but are divided into numerous tribes, forming separate kingdoms and states, which are frequently at war with each other.

Gallery. An underground passage, whether cut in the soil or built in masonry; it forms the communication between the inner and exterior works of a fortified place. When prepared for defense, it is a defensive gallery. In military mines, galleries are the underground passages leading to and connecting the mine chambers. *Scarp and counterscarp galleries* are covered passages built in the scarp and counterscarp to give a flanking fire in the ditch.

Gallery Descent of a Ditch. Is the term applied when the besiegers cross the ditch by an underground passage.

Gallet (*Fr.*). See JALET.

Galling Fire. A sustained discharge of cannon or small-arms, which by its execution greatly annoys the enemy.

Gallipoli. An important town and sea-

port of Turkey in Europe, in the province of Rumili, is situated on the peninsula of the same name at the northeast extremity of the Dardanelles, and about 180 miles west-south-west of Constantinople. It was once fortified, but its only defense now is a sorry square castle with an old tower. In 1857 the town was taken by the Turks, and formed the earliest Turkish possessions in Europe. In 1854 the allied armies of England and France occupied it.

Gallipoli. An important commercial seaport of Italy, in the Neapolitan province of Terra di Otranto. It has a good harbor, and in time of war is an important position, being strongly protected by fortifications and a castle. In 450 the town was sacked by the Vandals; in 1284 it was destroyed and almost depopulated by Charles of Anjou; and during subsequent centuries suffered severely from the Venetians, French, Spaniards, and Turks. In 1809 it repulsed an attack from the English flotilla.

Gallop. A mode of running by a quadruped, particularly by a horse, by lifting alternately the fore feet and the hind feet together, in successive leaps or bounds. A word of command in the cavalry service.

Galloper. A carriage on which very small guns are conveyed, having shafts on which the gun may be conveyed without a limber. This carriage is no longer used.

Gallowglass. In ancient times, a heavy-armed foot-soldier of Ireland and the Western Isles.

Galway. A seaport town of Ireland, and capital of Galway County. It was originally surrounded with walls. It was conquered by Richard de Burgo in 1232; in 1690 the city declared for King James, but was taken by Gen. Ginckel immediately after the battle of Aughrim, July 12, 1691.

Gamala. A town and strong fortress in Palestine, frequently mentioned by Josephus. Its site, though so remarkable and minutely described, had been forgotten for nearly 18 centuries; but it has latterly been identified with *El-Hossn*, which lies to the east of the Sea of Tiberias, nearly opposite the town. In the Jewish rebellion it revolted against Agrippa, who besieged it for seven months, but without success. It was afterwards, however, taken by Vespasian after a spirited resistance, and an indiscriminate slaughter of the inhabitants took place, 4000 being put to the sword, and 5000 being said to have thrown themselves from the walls, and to have been dashed to pieces on the rocks below.

Gambado. A case of leather, formerly used to defend the leg from mud, and in riding on horseback.

Gambeson (*Fr.*). A term which the French formerly applied to a coat of mail that was worn under the cuirass. It was likewise called *cotte gamboisée*. It was made of two strong cloths interwoven with pointed worsted.

Gamelle (*Fr.*). A wooden or earthen bowl formerly used among the French soldiers for their messes. It generally contained the quantity of food which was allotted for 3, 5, or 7 men belonging to the same room. The porridge-pots of the navy were made of wood, and held a certain allowance. During the monarchy of France, subaltern officers and volunteers were frequently punished for slight offenses by being sent to the *gamelle*, and excluded from their regular mess; they were put upon short allowance according to the nature of their transgression.

Gantlope (*Fr.*). Corruptly *gauntlet*, from the French *gant*, a glove. A military punishment, which consisted in passing along the whole line, and receiving a blow from every man's iron glove or gauntlet (*gantelet*). Whips and canes were subsequently used; this mode of punishment is now obsolete.

Gaol. A withe used for binding fascines or securing gabions.

Gap. An opening for a passage or entrance; an opening which implies a breach. *To stand in the gap*, to expose one's self for the protection of something; to make defense against any assailing danger. *To stop a gap*, to secure a weak point; to repair a defect.

Gap. A small town of France, capital of the department Hautes Alps. It was sacked and almost wholly reduced to ashes by Victor Amadeus of Savoy in 1692.

Gar. The general term used by the Saxons for a weapon of war.

Garamantes. A Libyan people of the old race called *Amazerghe*, who in ancient times inhabited the largest oasis of the desert of Sahara. When the Romans became masters of North Africa, they found it necessary to repress the barbarian tribes, and accordingly Cornelius Balbus Gaditanus the younger, as pro-consul, was sent against this people. He succeeded in defeating them, and obtained the honors of a triumph; but, owing to their nomadic character, he was unable thoroughly to subdue them.

Garçon-Major (*Fr.*). An officer, so called in the old French service. He was selected from among the lieutenants of a regiment to assist the aid-majors in the general details of duty.

Garda, Lake of. A lake of Northern Italy, lying between the provinces of Lombardy and Venice. In 1796 the battle of Rivoli was fought near its eastern shore, in which Bonaparte defeated Wurmser.

Gardant. In heraldry, is said of an animal which is represented full-faced, and looking forward.

Garde (*Fr.*). Guard. *Garde de l'armée*, the grand guard of an army. Guards in the old French service were usually divided into three sorts: *guards of honor*, *fatigue guard*, and the *general's guard*. That was called a *guard of honor* in which the officers and men were exposed to danger. A *fatigue guard* belonging to a garrison or camp. A *gen-*

eral's guard was mounted before the door or gate of a house in which the commanding officer resided.

Garde-General d'Artillerie (*Fr.*). An officer was so called under the old government of France, who had charge of all the ordnance and stores belonging to his majesty for the land service. He gave receipts for all ammunition, etc., and his bills were paid by the treasurer-general of the army.

Garde, Imperiale (*Fr.*). See GUARDS, IMPERIAL.

Garde, Nationale (*Fr.*). See NATIONAL GUARDS.

Garde Pluie (*Fr.*). Literally means a fence, or cover against rain. This machine was originally invented by a Frenchman, and submitted to the Prussians, who adopted it for the use of their infantry. Under the cover of them, the besieged, or the troops stationed in the posts attacked, would be able to keep up a brisk and effective discharge of musketry during the heaviest fall of rain, and thereby silence or considerably damp the fire of the enemy.

Gardelegen. A small town of Prussian Saxony, situated about 80 miles north-north-west of Magdeburg, on the Milde. It was destroyed by Duke Dervan in 683, and rebuilt about 924. It remained a free town until 1478.

Gardens. In ancient military history, places of resort to practice military exercises.

Gardes Blancs (*Fr.*). Were Roman militia, composed of picked men.

Gardes Costes, or Côles (*Capitaineries*), *Fr.* The maritime divisions, into which France was formerly divided, were so called. Each division was under the immediate superintendence of a captain, named *capitaine gardes-costes*, who was assisted by a lieutenant and an ensign. Their duty was to watch the coast, and to attend minutely to everything that might affect the safety of the division they had in charge.

Gardes de la Porte (*Fr.*). A company so called during the monarchy of France, and of so ancient a date, indeed, with respect to original institution, that it appears to have been coeval with it. Mention is made of the *gardes de la porte* in the oldest archives or records belonging to the king's household, in which service they were employed, without being responsible to any particular treasurer as other companies were. This company consisted of 1 captain, 4 lieutenants, and 50 guards. The captain and officers received their commissions from the king. The first took an oath of fidelity to the king in person, and received the *bâton* from his hands. The duty he did was purely discretionary, and depended on his own will. The lieutenants served by detachment, and took their tour of duty every quarter. Their specific service consisted in guarding the principal gate belonging to the king's apartments. They were relieved at night by the body-guards, and delivered the keys to a brigadier belonging to the Scotch garrison.

Gardes du Corps (Fr.). The body-guards. Under the old French government, they consisted of a certain number of gentlemen or cavaliers whose immediate duty was to attend the king's person. They were divided into four companies, under as many captains, whose tour of duty came every quarter. They took rank above the *gens d'armes* and the king's light cavalry. The first and most ancient of the four companies was called the Scotch company, which was established by Charles VII. of France in 1423.

Gardes Françaises (Fr.). The French guards. In 1563 Charles IX., king of France, raised a regiment for the immediate protection of the palace. The colonel of the *gardes Française* was on duty throughout the year, and was entitled to the *bâton de commandement* in common with the four captains of the body-guards. Peculiar privileges were attached to every officer belonging to this body. No stranger, not even a native of Strasburg, Savoy, Alsace, or Piedmont, could hold a commission in the French guards. In the revolution of 1789 they took a very active and leading part.

Gardes-magazines (Fr.). In the old French service there were two sorts of magazine guards,—one for the military stores and the other for the artillery. The first was subject to the grand master, and the second was appointed by the secretary at war. *Gardes particuliers des magasins d'artillerie*, officers appointed by the grand master of ordnance for the specific purpose of attending to the ammunition, etc. Their pay was in proportion to the quantity of stores with which they were intrusted.

Gardes Suisses (Fr.). A celebrated Swiss corps in the French army, constituted "Gardes" by royal decree in 1616. They comprised upwards of 2000 men, were always unwavering in their fidelity to the Bourbon kings, and are chiefly remarkable for their heroic end. On August 10, 1792, they withstood the Parisian revolutionary mob, and defended the palace of the Louvre till almost every man was cut down. During the resistance they offered, the royal family was enabled to escape to such shelter as the National Assembly afforded. *Gardes Suisses du corps du Roi*, one hundred Swiss guards who were immediately attached to the king's person. They were a select body of men who took an oath of fidelity to the king, and were formed into a regular troop. But in the last period of the monarchy of France, the principal duties of the one hundred Swiss guards consisted in domestic and menial attendance.

Garigliano. A river in Southwestern Italy. After long waiting and refusing to recede a step, the great captain Gonsalvo de Cordova made a bridge over this river December 27, 1503, and surprised and totally defeated the French army. Gaeta surrendered a few days after.

Garland. A sort of chaplet made of flowers, feathers, and sometimes of precious

stones, worn on the head in the manner of a crown. Both in ancient and modern times it has been customary to present garlands of flowers to warriors who have distinguished themselves. A beautiful young woman was generally selected for that purpose.

Garlasco. A market-town of Northern Italy, 24 miles from Novara. The Austrians, when they invaded Italy in 1849, crossed the Po near this place.

Garnished. In heraldry, any charge is said to be garnished with the ornaments set on it.

Garnish-nails. Diamond-headed nails, formerly used to ornament artillery carriages.

Garret. A turret or battlement. Now obsolete.

Garretted. Protected by turrets. Now obsolete.

Garrison. A body of troops stationed in a fort or fortified town to defend it against an enemy, or to keep its inhabitants in subjection. A strong place, in which troops are quartered for its security. *In garrison*, in the condition of a garrison; doing duty in a fort or as one of a garrison. *Garrison town*, is a strong place, in which troops are quartered and do duty for the security thereof, keeping strong guards at each post, and a main-guard in or near the market-place. As a verb it means to place troops in, as in a fortress, for its defense; to furnish with soldiers; as, to garrison a fort or town. To secure or defend by fortresses manned with troops; as, to garrison a conquered territory.

Garrison Court-martial. Is a legal tribunal for the examination and punishment of offenders against martial law, or against good order and military discipline. It is composed of three members and a judge-advocate. See COURT-MARTIAL, and TRIAL; also JUDGE-ADVOCATE.

Garrison Gin. The largest size gin. See GIN.

Garrison Guns. Guns used in fortifications. Fortress guns.

Garrison des Janissaries (Fr.). The *élite* or flower of the Janissaries of Constantinople was frequently sent into garrison on the frontiers of Turkey, or to places where the loyalty of the inhabitants was doubted. The Janissaries did not indeed assist in the immediate defense of a besieged town or fortress, but they watched the motions of all suspected persons, and were subject to the orders of their officers, who usually commanded the garrison.

Garter, Order of the. One of the most ancient and illustrious of the military orders of knighthood. It was instituted by Edward III. of England, and dates from about the year 1350, though some writers say 1344. Its origin is variously related. In Rastel's "Chronicles" it is stated that this order was devised by Richard I. at the siege of Acre, when he is said to have caused 26 knights to wear thongs of blue leather about

their legs. But the common account is, that the Countess of Salisbury happened at a ball to drop her garter, and that the king took it up and presented it to her, at the same time exclaiming, *Honi soit qui mal y pense*,—"Evil be to him who evil thinks," in reference to the smiles which he observed the action had excited among some of the bystanders; adding "that shortly they should see that garter advanced to so high an honor and renown, as to account themselves happy to wear it." It is founded in honor of the Holy Trinity, the Virgin Mary, St. Edward the Confessor, and St. George; but the last, who had become the tutelary saint of England, was considered its special patron; and for this reason it has always borne the title of "The Order of St. George," as well as of "The Garter," and those who wore it were called "Knights of St. George." The number of knights companions was originally 26, including the sovereign, who is chief of the order; but in 1786 a statute was passed to the effect that this number should be irrespective of princes of the royal family, and illustrious foreigners on whom the honor might be conferred. The well-known emblem of the order is a dark-blue ribbon edged with gold, bearing the motto *Honi soit qui mal y pense* in golden letters, with a buckle and pendant of gold richly chased, and is worn on the left leg below the knee. The mantle is of blue velvet, and on the left breast a star is embroidered. The hood and surcoat are of crimson velvet, and lined with white taffeta. The hat is of black velvet, with a plume of white ostrich feathers, in the centre of which there is a tuft of black herons' feathers, all fastened to the hat by a band of diamonds. The collar is of gold, and consists of 26 pieces, each in the form of a garter. The "George" is the figure of St. George on horseback encountering the dragon; it is worn to the collar, and there is a lesser "George" pendant to a broad, dark-blue ribbon over the left shoulder.

Garter King-of-Arms. Is the principal king-of-arms in England. Though held by the same person, they are distinct offices. The first was instituted for the service of the order of the Garter (which see), not on its first foundation, but afterwards by Henry V. as sovereign, with the advice and consent of the knights-companions. The peculiar duty of Garter king-of-arms is to attend upon the knights at their solemnities, to intimate their election to those who are chosen by the order, to call them to be installed at Windsor, to cause their arms to be hung up over their stalls, and to marshal their funeral processions, and those of royal personages, and of members of higher nobility. In the capacity of principal king-of-arms, he grants and confirms arms, under the authority of the earl marshal, to whom he is not subject as Garter king-of-arms. All new grants or patents of arms in England are first signed and sealed by him, and then by the king

(of arms) of the province to which the applicant belongs.

Gas-check. The device used in breech-loading cannon to prevent the gas from escaping at the breech. (See **BROADWELL RING** and **BREECH-LOADING**.) Also a term applied by the English to the soft metal sabot in the rear of rifled projectiles.

Gasconade. To boast; to brag; to vaunt; to bluster. The term was originally derived from the Gascons, or people of Gascony, in France, who it seems have been particularly distinguished for extravagant stories.

Gasconader. A great boaster; a blusterer.

Gascony. Formerly a district in the southwest of France, situated between the Bay of Biscay, the river Garonne, and the Western Pyrenees. It derived its name from the Basques, or Vasques (Lat. *Vascones*), who, driven by the Visigoths from their own territory on the southern slope of the Western Pyrenees, crossed to the northern side, and settled here. In 602, after an obstinate resistance, the Vasques were forced to submit to the Franks. They now passed under the sovereignty of the dukes of Aquitania, who for a time were independent of the crown, but were afterwards conquered by King Pepin, and later by Charlemagne. Subsequently it became incorporated with Aquitania, and for a time became part of the English possessions, but was afterwards reconquered by the French.

Gastein, Badgastein, or Wilbad-Gastein. A village of Austria, 49 miles south of Salzburg. On August 14, 1865, a convention was concluded here between Austria and Prussia, to make arrangements relative to the government of the duchies of Schleswick, Holstein, and Lauenburg, which their combined forces had wrested from Denmark.

Gate. A door of strong planks with iron bars to oppose an enemy. Gates are generally fixed in the middle of the curtain, from whence they are seen and defended by the two flanks of the bastions. They should be covered with a good ravelin, that they may not be seen or enfiladed by the enemy. The palisades and barriers before the gates within the town are often of great use.

Gateshead. A borough in Durham, on the Tyne, opposite Newcastle. At Gatesheadfell, William I. defeated Edgar Atheling in 1068.

Gateway. The passage or opening in which a gate or large door is hung. The gateway being a most important point in all fortified places, is usually protected by various devices. It is flanked by towers with loop-holes, from which assailants may be attacked, and is frequently overhung by a machicolated battlement, from which missiles of every description were poured upon the besiegers.

Gath. One of the five chief cities of the Philistines, was situated on the frontiers of Judah, and was in consequence a place of much importance in the wars between the

Philistines and the Israelites. It formed in fact the key of both countries, and was strongly fortified.

Gatling Gun. Is a machine gun, the 1 inch composed of six and the $\frac{1}{2}$ inch of ten rifled barrels of steel, made to revolve around a central axis parallel to their bores, by means of a hand crank. As each barrel comes opposite to the hopper on the left side of the cylinder, a self-primed metal case cartridge falls into a groove of the cartridge-carrier, is pressed into the breech by a plunger, and held there until exploded by the firing-pin. The empty case is withdrawn from the barrel by an extractor attached to the cylinder containing the firing-pin. With each revolution of the crank the 1-inch gun fires once, and the $\frac{1}{2}$ -inch gun three times. The $\frac{1}{2}$ -inch gun is reduced to caliber .45 inch, in order to use with it the projectile of the breech-loading musket.

Gaucha. One of the native inhabitants of the pampas of La Plata, of Spanish-American descent, celebrated for independence, horsemanship, and rude, uncivilized mode of life.

Gaugamela (now *Karmelis*). A village in the district of Aturia, in Assyria, the scene of the last and decisive battle between Alexander and Darius Codomannus, 331 B.C., commonly called the battle of Arbela. See **ARBELA**.

Gauges. In gunnery, are brass rings with handles, to find the diameter of all kinds of shot with expedition. Also instruments of various kind for verifying the dimensions of cannon and projectiles and the various parts of small-arms. Modern small-arms are made on the *interchangeable principle*, each part being accurately made to gauges. This principle has revolutionized the manufacture of small-arms. It was first introduced at the U. S. armory, at Harper's Ferry, by Maj. Wade, of the Ordnance Corps.

Gaul, or Gallia. The ancient name of France and Belgium. The natives, termed by the Greeks *Galatæ*, by the Romans *Galli* or *Celtæ*, came originally from Asia, and invading Eastern Europe, were driven westward, and settled in Spain, North Italy, France and Belgium, and the British Isles.

Gauntlet (Fr. *gantilet*). A large glove of mail; a covering for the hand with plates of metal on the back, worn as a part of the defensive armor in ancient times. A long glove, covering the wrist; as, a riding-gauntlet. To *take up the gauntlet*, to accept a challenge. To *throw down the gauntlet*, to offer or send a challenge; to defy.

Gauntlet. A kind of military punishment; the gantelet used in the expression to *run the gauntlet*. See **GANTLOPE**.

Gauntleted. Wearing a gauntlet.

Gawelgur. A strong fortress of Hindostan, in the dominions of the Nizam or ruler of Hyderabad. It was taken by Gen. Wellesley, December 14, 1803, after a siege of two days, but was restored to the rajah on the conclusion of peace.

Gasa. A city of the Philistines, of which Samson carried off the gates, about 1120 B.C. It was taken by Alexander after a long siege, 332, and near it Ptolemy defeated Demetrius Poliorcetes, 312 B.C. It was taken by Saladin, 1170; by Bonaparte, March, 1799; and by the Egyptians in 1831.

Gaze. In heraldry, when a beast of the chase is represented as *affronté*, or full-faced, it is said to be at *gaze*.

Gazette. To announce or publish in a gazette; to announce officially; as an appointment either civil or military. All commissions in the British army, militia, fencible, and volunteer corps must be gazetted.

Gazons. In fortification, pieces of fresh earth, or sods, covered with grass, and cut in the form of a wedge, about a foot long and half a foot thick, to line the outsides of a work made of earth, as ramparts, parapets, banquettes, etc. The first bed of gazons is fixed with pegs of wood, and the second bed is so laid as to bind the former, by being placed over its joints, and so continued till the works are finished. Between those it is usual to sow all sorts of binding weeds or herbs, in order to strengthen the rampart.

Gear. Warlike accoutrements; military harness; equipage.

Geat. The hole through which the metal is conveyed to the mold in casting ordnance.

Gebegis. Armorers among the Turks were so called.

Gebelis. A Turkish corps of picked men. **Gebelus.** Every Timariot in Turkey, during a campaign, is obliged to take a certain number of horsemen, who are called *gebelus*, and to support them at his own expense. He is directed to take as many as would annually cost 8000 *aspres* for subsistence.

Gela. In ancient times, a very important city on the southern coast of Sicily. It was founded by a Rhodian and Cretan colony, in 690 B.C. In 505 B.C., Cleander made himself tyrant, and the colony reached its highest pitch of power under his brother Hippocrates, who subdued almost the whole of Sicily, with the exception of Syracuse. Gelon, the successor of Hippocrates, pursued the same career of conquest, and Syracuse itself fell into his hands, and was even made his principal residence, Gela being committed to the government of his brother Hiero. After many vicissitudes during the Carthaginian war in Sicily, it ultimately fell into decay. Its ruin was completed by Phintias, tyrant of Agrigentum, who, a little before 280 B.C., removed the inhabitants to a town in the neighborhood which he had founded, and to which he gave his own name. It occupied what is now the site of Terra Nova.

Gelibach. A sort of superintendent or chief of the *gebegis*, or armorers, among the Turks. He is only subordinate to the *toppi bachi*, or the grand master of the Turkish artillery.

Gellia Gens. A plebeian family; was of Samnite origin and afterwards settled at

Rome. There were two generals of this family in the Samnite wars, Gellius Status in the second Samnite war, who was defeated and taken prisoner 805 B.C., and Gellius Egnatius in the third Samnite war.

Gembloux. A town of Belgium, on an affluent of the Sambre, 11 miles northwest from Namur. The French gained a victory over the Austrians near this town in 1794.

Genappe. A village of Belgium, in Southern Brabant, on the banks of the Dyle, 18 miles southeast from Brussels. Several military actions took place here in 1815, both before and after Waterloo, between the French and the allied forces.

Gendarmes, or Gens d'Armes (men-at-arms). Originally, and up to the time of the first French revolution, the most distinguished cavalry corps in the service of the Bourbon kings, to whom they formed a sort of body-guard. Under existing arrangements the gendarmes constitute a military police, and comprise both cavalry and infantry. The force consists principally of soldiers taken from the army, generally on account of intelligence and good conduct. The men receive much higher pay than the rest of the army, of which, however, the corps is a part, and they are liable in cases of emergency to be sent on active service.

Gendarmery (Fr. *gendarmerie*). The body of gendarmes or gens d'armes.

General. A term for the roll of the drum which calls the troops together. To "beat the general" is a phrase drawn from the French drum instructors, "*Battre la Generale*."

General. The highest military title in the U. S. army, and the highest military title below that of field-marshal in European armies. A general ordinarily commands no body of men less than an army or *corps d'armée*.

General, Adjutant-. See ADJUTANT-GENERAL.

General, Brigadier-. See BRIGADIER-GENERAL.

General, Colonel. An honorary title, or military rank, which is bestowed in foreign services. Thus the Prince of the Peace in Spain was colonel general of the Swiss guards.

General Court-Martial. See COURT-MARTIAL.

General de Bataille, or General Major. A particular rank or appointment, whose functions correspond with those of a *ci-devant* marshal of France. This situation is intrusted to a general officer, and is only known among the armies of Russia, and some other Northern powers. He takes precedence in the same manner that our major-generals do of all brigadier-generals and colonels, and is subordinate to lieutenant-generals.

General des Galères (Fr.). Commander of the galleys, an officer of high rank and extensive jurisdiction in France.

General des Vivres (Fr.). Commissary

of stores; a sort of chief commissary or superintendent-general of stores, whose functions were to provide ammunition, bread, and biscuit for the army.

Generalissimo. The chief officer in command of an army. This word is used in most foreign languages. It was first used to designate the absolute authority of Cardinal Richelieu, when he went to command the French army in Italy.

General, Lieutenant-. The second rank among general officers, and next below that of general. The normal command of a lieutenant-general is that of a division, but he is sometimes intrusted with the command of an entire army.

General, Major-. The rank next below that of lieutenant-general, and above brigadier-general. He usually commands a division; a general of division.

General Officers. Are all officers whose authority extends beyond the immediate command of a regiment, and who have either separate districts or departments at home, or commands on foreign service. A brigade is the smallest body of men constituting the command of a general officer. In an army of very large proportions, the normal sequence of command would be the following: The general commanding-in-chief, generalissimo, captain-general, or field-marshal would command the whole force; the generals would have separate *corps d'armée*; the lieutenant-generals, wings of those *corps d'armée*; the major-generals, divisions in the wings; and brigadier-generals, brigades in the divisions. In practice, however, an army is rarely large enough to allow of this exact scheme of military hierarchy being carried out; and general officers are also frequently assigned to high commands without regard to seniority. In the U. S. service there are one general, one lieutenant-general (whose offices expire with the present incumbents), three major-generals, and six brigadier-generals. The President is *ex officio* commander-in-chief of the army. In the English service the sovereign is captain-general, and under the sovereign is the commander-in-chief, who takes rank as field-marshal. In the staff corps the word general is also used, as surgeon-, quartermaster-, adjutant-general, etc., to denote that the holder of the office has charge of his special department, and does not necessarily imply that he is a general officer. The chiefs of staff departments, however, in the U. S. service are usually of the rank of brigadier-general. In the German armies, and among the sovereigns of the North, there are certain generals of cavalry, and others of infantry, who take rank of all lieutenant-generals. In these armies it is usual for generals, lieutenant-generals, and major-generals to take their routine of duty, and rise progressively in the infantry or cavalry corps to which they were originally appointed, until they arrived at a chief command; whereas in France and other coun-

tries a major-general might be employed to take charge of either infantry or cavalry, without any regard being paid to the particular line of service in which he was bred.

General Orders. See **ORDERS**.

General's Guard. See **GARDE**.

Generalship. The office of general; the exercise of the functions of a general; the skill and conduct of a general officer; military skill in a commander.

Geneva. A walled town of Switzerland, and the capital of a small canton, at the western extremity of the lake of the same name. In 1784 and 1794 revolutions took place in the city and state of Geneva; in 1798 it was taken by the French, and, till 1813, it was the capital of the department *Léman*, in the French empire, under Napoleon I. In 1814 it joined the Helvetic Confederation.

Geneva, Convention of. In October, 1863, an international convention was held at Geneva, Switzerland, comprising 14 governments, including Great Britain, France, Austria, Russia, Prussia and Italy, who were represented by delegates, and propositions were drawn up forming the "Red Cross Society," for the succor of the wounded in time of warfare. It gave aid to the sick and wounded during the Franco-German war, and its flag is recognized by all powers as neutral.

Genius. In a military sense, natural talent or disposition to every kind of warlike employment, more than any other; or, the aptitude a man has received from nature to perform well and easily that which others can do but indifferently and with a great deal of pains.

Genoa. A fortified maritime city in Northwestern Italy, once a celebrated republic, now the capital of a province of Northwestern Italy. From the 11th to the 18th century Genoa was the capital of a flourishing republic; it was bombarded by the French in 1684, and submitted to the Austrians in 1746; but, in consequence of a citizen having been abused by an Austrian officer, the inhabitants rose and massacred most of the soldiery, and drove away the remainder. The republic in 1798 assumed the French form of government, with the title of Ligurian republic, and in 1805 it was annexed to the French empire. In 1815 it was ceded to the king of Sardinia, and in 1859 the French troops landed here on their route to oppose the Austrian army, which had invaded Sardinia.

Genouillère. That part of the parapet of a battery which remains above the platform and under the gun, after the opening of the embrasure has been made. The name is derived from the French *genou*, the knee. The height of the *genouillère* is regulated by that of the gun-carriage, generally from 2 to 3 feet.

Gens. In Roman antiquity, a clan, embracing several families, whose bond of alliance was a common name and certain reli-

gious rites performed in common. Persons of the same gens were called *gentiles*, while those of the same family were designated *agnati*.

Gens (Fr.). A word in much desultory use among the French, signifying, in the general acceptance of it, people, servants, soldiers, etc. This word is likewise used to distinguish bodies of men that are in opposition to each other.

Gens d'Armes. See **GENDARMES**.

Gentilhommes de la Garde (Fr.). Gentlemen of the guard. Commonly called *Au bec de corbin*, or the battle-axe, from the weapon which they carried. This company went through many alterations during the monarchy of France. During the last years of that government it consisted of 200 guards, under the command of a captain, a lieutenant, and an ensign. The captain had the power of giving away the subaltern commissions, and had, moreover, the entire management of the rest; every vacancy being in his gift. They marched in file, each holding his battle-axe, before the king on days of public ceremony. When the company was first raised, its particular duty was to attend the king's person, and to be constantly near him on the day of battle.

Gentlemen-at-arms (formerly called the *Gentlemen-Pensioners*). The body-guard of the British sovereign, and, with the exception of the yeomen of the guard, the oldest corps in the British service. It was instituted in 1509 by Henry VIII., and now consists of 1 captain, 1 lieutenant, 1 standard-bearer, 1 clerk of the cheque, and 40 gentlemen, who must all be retired military officers of service and distinction. The attendance of gentlemen-at-arms is now rarely required, except on the occasion of coronations and important state ceremonies.

Geographical Department, Commander of. Is assimilated to the commander of a separate army, with the same powers and duties in similar cases over all the troops within the limits of the department. In all countries he derives his authority to command from the highest power of the government. In the United States he is assigned by order of the President, who alone can relieve him, and who also fixes the limits or boundaries of the department. His duties are mainly derived from customs of service. The only duties defined by statute relate to general courts-martial, which he can convene, and his action is final on all cases tried by such courts, except in the case of a general officer, or where the sentence of the court extends to the loss of life or the dismissal of a commissioned officer. In time of war he is authorized by existing laws to execute the death penalty in cases of persons convicted as spies, mutineers, deserters, or murderers, and in cases of guerrilla marauders convicted in time of war of robbery, burglary, arson, rape, assault with intent to commit rape, or violation of the laws of war. See **DEPARTMENT, MILITARY**.

Geographical Division, Military. In the United States a geographical military division consists of a number of geographical military departments, usually under the command of a general officer.

Geometry. That branch of mathematics which investigates the relations, properties and measurements of solids, surfaces, lines, and angles; the science which treats of the properties and relations of magnitudes. Its usefulness extends to almost every art and science. It is by the assistance of geometry that engineers conduct all their works, take the situation and plans of towers, the distances of places, and the measure of such things as are only accessible to the sight. It is not only an introduction to fortification, but highly necessary to mechanics. On geometry, likewise, depends the theory of gunnery, mining, mechanics, hydraulics, pneumatics, etc.

George, Lake. A beautiful sheet of water in the State of New York. Its length is 86 miles; its breadth from 1 to 8 miles. Lake George was the scene of important military operations during the French and Indian war of 1755-59. Here stood Fort George, Fort William Henry, and other works.

George, St. Patron of England and Russia, is reputed to have been born in Palestine in the 8d century. According to the legend, he became a prince in Cappadocia, and was distinguished for his exploit of rescuing a king's daughter from a dragon. He was a Christian, and suffered martyrdom at Nicomedia, April 23, 303, for having torn down the edict of Diocletian against Christians, the emperor himself being then in the city.

George, St., Banner of. Is white with red cross. According to Sir N. H. Nicolas, the cross of St. George was worn as a badge over the armor of every English soldier "in the 14th and subsequent centuries, even if the custom did not prevail at a much earlier period," to indicate that he was in the service of the crown. On the invasion of Scotland by Richard II. in 1386, it was ordained that every man of the English party should wear a sign of the arms of St. George both before and behind. A similar ordinance was adopted by Henry V. for the government of his army in France. The cross of St. George forms a part of the British standard.

George, St., Knights of. See **GARTER, ORDER OF THE.**

George, The. The badge of the order of the Garter exhibiting the figure of St. George on horseback piercing the falling dragon, which lies on a mount. See **GARTER.**

Georges Conspiracy. Took place in France; Gens. Moreau and Pichegru, and Georges Cadoudal, who was commonly known by the name of Georges, and others were arrested at Paris, charged with a conspiracy against the life of Bonaparte, and for the restoration of Louis XVIII., February, 1804. Pichegru was found strangled in prison, April 6, and 12 of the conspirators, including Georges, were executed, and others im-

prisoned, June 22. Moreau was exiled and went to America; in 1818 he was killed before Dresden.

Georgia. Called by the Russians Grusia, a considerable country of Asia, situated between the Black Sea and the Caspian, to the north of Armenia, and forming a government of Russia. The Georgians are skilled in the bow, and are thought to be the best soldiers in Asia. Georgia was formerly one kingdom, the inhabitants of which were Christians; but, in 1689, when it was conquered by the Persians, the country was divided between two native princes, by themselves called kings, but by the Sophia styled governors. Each of these had a guard of Mohammedan horse in their pay. In 1802 it was annexed to Russia.

Georgia. One of the original States of the United States, bounded on the north by Tennessee and North Carolina, on the east by South Carolina and the Atlantic Ocean, south by Florida, and west by Florida and Alabama. It was named in honor of King George II., who granted a charter for establishing a colony there in 1732; but a permanent settlement was not made till the following year, when Oglethorpe established himself at what is now Savannah. The colony soon became involved in several contests with the Spaniards of Florida, who claimed the territory. In 1789 Oglethorpe invaded Florida, but without much success. In 1742 the Spaniards retaliated by invading Georgia; but they also effected nothing. The next noteworthy event in the history of the colony was a war with the Cherokees in 1761, which was terminated by their suing for peace, after their country had been laid waste. They were afterwards peaceable, and were removed to the Indian Territory in 1838. In the war of the Revolution Georgia warmly sided with the colonies, and, in consequence, suffered severely at the hands of the British, who overran the country, and captured Savannah, December 29, 1778. In the following year (October, 1779) the Americans and French attempted to retake it, but were repulsed with severe loss. In the civil war (1861-65), Georgia took an active part against the Union, and suffered severely in consequence. Atlanta was captured September 2, 1864, after which Gen. Sherman marched with his army through the State to the sea over an area extending from 20 to 60 miles in width, destroying railroad communication, etc., and ending with the capture of Savannah, December 20, 1864. This magnificent military movement effectually humbled the State, and in 1866 the President issued a proclamation declaring it no longer in a state of insurrection.

Gerasa, or Jerash. An ancient city of Syria, whose site is now marked by very extensive and magnificent ruins, situated about 85 miles east of the Jordan, at the eastern extremity of the land of Bashan, and on the borders of the great desert of Hauran. But little of its early history is known. In the

time of the Antonines it had arrived at the height of its splendor and prosperity. It was taken by Alexander Jannæus in 85 B.C.; the Jews burned it at the commencement of their last war with the Romans; it was taken and plundered by Annus, the general of Vespasian, and in 1122 its castle was destroyed by Baldwin II. of Jerusalem.

Gerbe. An ornamental firework. See **Pyrotechny**.

Gerberoi. In Normandy, north of France. Here William the Conqueror was wounded in battle by his son Robert, who had joined the French king, Philip I., 1078.

Gerit (Fr.). A Turkish dart 2½ feet long.

Germany (Lat. *Germania*). The name given to a large portion of Central Europe, composed of a number of independent states united together, and forming the German empire. In the time of Julius Cæsar the Germans were the most formidable and warlike of all the European barbarians. They long withstood the attempts of the Romans to subdue them; and, although that people conquered some parts of the country, they were expelled before the close of the 3d century. In the 5th century the Huns and other tribes prevailed over the greater portion of Germany. In the latter part of the 8th century Charlemagne subdued the Saxons and other tribes, and was crowned emperor at Rome, December 25, 800. At the extinction of his family the empire became elective, 911, and was generally obtained by a member of the house of Hapsburg from 1437 to 1806, when the emperor Francis Joseph II. formally renounced the title of emperor of Germany, having assumed that of emperor of Austria two years previously. The Confederation of the Rhine was formed July 12, 1806; the Germanic Confederation, June 8, 1815; and the North German Confederation, August 18, 1866. In consequence of the success of the Prussian arms in the war with France (1870-71) the new empire of Germany was founded, and the king of Prussia declared emperor, January 18, 1871.

Germinal Insurrection. That of the faubourgs of Paris, suppressed on 12th Germinal, year III. (April 1, 1795).

Gerona. A strong town of Spain, in Catalonia, at the confluence of the Oña and Ter, the latter of which flows through the town. It is built in the form of a triangle, at the foot of a steep mountain, and is surrounded by walls flanked with fortifications, and covered by a fort erected on a hill to the north of the town. It was besieged 28 times, and taken 5 times. In June, 1808, it successfully resisted the French, but after suffering much famine surrendered December 12, 1809.

Gesate, or Gessate (Fr.). Formerly a Gallic mercenary soldier, who volunteered his services beyond his native country. These adventurers, or knights-errant, were called *gesates*, either on account of the *geese*, or large dart, which they carried, or, as Polybius imagines, on account of the subsistence they received, which was called by that name.

Geserne. The Anglo-Norman term for battle-axe.

Geses and Materes. Were weapons adopted by the Allobroges (a body of ancient Gauls so called), independently of the broad cut-and-thrust sword which the Swiss still wear. These instruments were only one cubit long; half the blade was nearly square; but it terminated in a round point that was exceedingly sharp. Not only the Romans, but the Greeks received it into their armies. The former retained the full appellation and called it *gesse*, but the latter corrupted it into *yssa*. This is the only weapon with which those soldiers were armed that escorted malefactors, who were condemned to death, to the place of execution. The term *gesse* was also applied to a sort of a javelin.

Gestic. Pertaining to deeds or feats of arms; legendary.

Gettysburg. Capital of Adams Co., Pa., situated near the southern border of the State, 8 miles from "Mason and Dixon's line." Here three days' severe fighting took place on July 1-3, 1863, between the invading Confederate army under Gens. Lee, Longstreet, and Ewell, and the Federals under Gen. George G. Meade.

On the morning of July 1, Maj-Gen. Reynolds, in command of the 1st Corps, advanced on the Emmittsburg road from Marsh Creek to Gettysburg, arriving about 10 o'clock A.M., and marched directly through the town, and soon after encountered a body of the enemy, which were driven back by Gen. Buford's cavalry, which allowed the 1st Corps to form up in order of battle on a ridge northwest of the town, which sloped to the west into a little open valley. Beyond this valley was a ridge of higher land thickly wooded. Across this valley the line of Gen. Reynolds advanced somewhat hastily, almost before it was well formed, and soon encountered a heavy force of the enemy's infantry, and was compelled to fall back, which it did in good order, and by a movement of its left centre against the enemy while falling back secured a large number of prisoners. The Confederate line being broken soon after, Gen. Reynolds again prepared to go forward. His line advanced as before, and drove the enemy from the valley and over the ridge at the farthest side, with a severe loss by the heavy fire of the foe. While reconnoitring on this ridge Gen. Reynolds was killed by a shot from the enemy. The 11th Corps now arrived and Gen. Howard took command of the whole field, Gen. Schurz commanding the 11th Corps. At about half-past 2 P.M. the enemy again advanced in force against the 1st Corps, which slowly fell back to its original position northwest of the town. The Confederate force advanced across the open space in line of battle, whilst their batteries shelled the position of the 1st Corps to cover the advance, but it met a fire so sharp and well served that it caused it to reel and fall back; the line was again formed and reinforced and

once more advanced, but with no better success. By this time the line was increased by three more of the enemy's divisions, and another charge was made by the whole force of the enemy. Their superior numbers enabled them to threaten both flanks of the Federal force, and notwithstanding a brave resistance the 1st Corps was compelled to fall back to the town. By this movement the 11th Corps was uncovered, and a heavy advance completely on its right flank compelled it to retire. The enemy advanced and took possession of the town, while the two corps of the Union troops fell back and occupied the west slope of the hill south of the town, held by Gen. Steinwehr. At dusk the 8d and 12th Corps arrived and next morning the 5th, making in all six corps, which were placed in position by Gen. Meade, the line stretching in a semicircle, having its convex centre toward Gettysburg, with the extreme toward the south and west. The heights on which they were posted sloped gently down from their front. The key of Gen. Meade's position was Cemetery Hill, a little distance south of the town, and on the northern slope of which the town itself is situated. The enemy having been largely reinforced during the night were prepared to give battle on the morning of the 2d, having formed line on a ridge which ran nearly parallel to the extreme of that on which the Federal forces were formed, and separated from them by a valley varying in width from 1 to 2 miles.

On the ridge occupied by Gen. Meade 100 guns were in position facing the enemy, with reserve artillery in the rear about equidistant from the flanks. The enemy had nearly 150 guns in position. During the forenoon of the 2d no movement of importance took place, but about noon Gen. Lee ordered a general attack on the Federal centre and left. His movement being discovered by the Union commanders they were prepared, and the 8d Corps, commanded by Gen. Sickles, was advanced more to the left and front in order to be in a more commanding position to repel the Confederate attack. He had hardly got into position when the enemy attacked. Having bravely resisted their furious onslaught for about two hours, and not receiving the expected reinforcements, the 8d Corps was compelled to fall back to its previous position, when a most desperate assault was made upon it by Longstreet's troops; but this part of the line being promptly strengthened it repulsed all the efforts of Longstreet, with great loss, however, on both sides. With the advance of Longstreet a part of the enemy advanced on the centre of the Union line, and meeting with stubborn resistance the battle grew fearful. The enemy pressed forward unrestrained. Gens. Sickles, Hancock, and Gibbon were wounded. The 1st and 2d Corps wavered and the enemy pressed up to the very guns of the batteries, which were exposed to capture; but the 6th Corps, al-

though wearied with marching, hurried up with shouts to the support, and the enemy staggered and drifted slowly back, and being pushed on their left flank by a strong force of the Federals, they retired. At this time a desperate dash was made by the Confederates on the extreme right, which had been weakened to support the centre and left. For a short time the attack was furious, but the Federals being speedily supported the enemy were kept in check, and finally retired about 9 o'clock P.M., having lost the day in every quarter.

The battle commenced again on the morning of the 3d by an artillery fire from the Confederate lines, and an aggressive movement of the right of the Federal forces under Gen. Slocum to drive Gen. Ewell farther back. This attack met with a prompt response from the latter, but Gen. Slocum having been reinforced by part of the 8d and 5th Corps, the struggle was evenly contested for some time, when additional reinforcements having arrived, the tide of battle was turned in favor of the Union troops, causing the enemy to retire, and at 11 o'clock A.M. a general quiet prevailed. The movements of the morning against Gen. Meade thus far had been made to cover up the designs of the Confederates. The battle of the previous day had demonstrated that the issue of the struggle turned on the occupation of Cemetery Hill, the key of Gen. Meade's position. To get possession of this spot was therefore the object of the enemy. Therefore Lee massed about 115 guns so as to subject the artillery on Cemetery Hill to more than a half circle of cross-fires. At about 1 o'clock P.M. the signal-gun was fired and the cannonading commenced. The fire of the enemy was concentrated on the position held by the 2d and 11th Corps. It drew a most terrific response from the Federal batteries, and as has been described by a spectator in the Confederate army, the almost simultaneous discharge of over 200 guns "made the air hideous with most discordant noise. The very earth shook, and the hills and rocks seemed to reel like a drunken man. For one hour and a half this most terrific fire was continued, during which time the shrieking of shell, the crash of fallen timbers, the fragments of rocks flying through the air, shattered from the cliffs by solid shot, the heavy muttering from the valley between the opposing armies, the splash of bursting shrapnel, and the fierce neighing of wounded artillery horses, made a picture terribly grand and sublime." At the termination of the firing, the left of the Union line was assaulted twice, which were handsomely repulsed with severe loss to the Confederates. And thus ended the memorable battle of Gettysburg. The forenoon of the 4th was devoted to the burial of the dead, and in the afternoon the Confederate forces commenced to retreat, leaving the Federal forces in possession of the hard-fought field, which covered the Union troops with the

highest honor and glory, but at a terrible sacrifice. During the three days the Confederate losses were 18,000 killed and wounded, and 13,000 missing, a large part of the latter prisoners; making a total of 31,000. The Union losses were 18,600 killed and wounded, and 6600 missing, chiefly prisoners captured on the first and second days, making a total loss of not less than 28,000 — *Extracts from D. Appleton's "History of the Rebellion," by Tenney, "Lippincott's Gazetteer," and "Haydn's Dates."*

Ghaut, or Ghât. A term in India signifying a pass through a range of hills; also a flight of stairs descending to the rivers for the accommodation of bathers, and as landing-places for boats.

Ghent (Fr. *Gand*). An ancient fortified city of Belgium, capital of East Flanders, situated at the confluence of the Lys and Scheldt. It commenced to acquire importance in the 12th century, when its fortifications were completed. In the 14th century, having revolted against the Duke of Burgundy, it was subdued after seven defeats, in some of which it suffered a fearful slaughter of its citizens. It again revolted against Charles V. in the 16th century, was again subdued, made to pay a heavy fine, and forced to pay for the erection of a citadel to keep it in subjection. The French became masters of Ghent in 1678, 1708, 1745, 1792, and again in 1795. The city was united to the kingdom of the Netherlands after the peace of Paris (1814), and is now a rich and populous city of Belgium. In this city on December 24, 1814, the terms of the treaty were agreed on, between the United States and British envoys, which put an end to the war of 1812–15.

Gheriah. A town of British India, in the presidency of Bombay. It was the principal post of Angria, a famous piratical prince, whose fort here was taken, and his whole fleet destroyed, by Admiral Watson and Col. Clive, in conjunction with the Mahrattas in 1758.

Ghizni, or Ghuznee. A fortified city of Afghanistan, built on a hill 7720 feet above the level of the sea, 90 miles from Cabul. It was the capital of a powerful empire of the same name, and is sometimes called the second Medina, from the great number of illustrious persons who have been interred there. The old town of Ghuznee was destroyed in the 12th century, and the modern one stands on a site about 3 miles from the ruins of the other. It was stormed and taken by Lord Keane in 1839. In 1842 the garrison surrendered to the Afghans, from whom, however, it was again taken in the same year by the British forces under Gen. Nott.

Ghoor, Ghore, or Ghour. A large district of Afghanistan. This was formerly one of the Persian governments; but in the 12th century its chiefs became independent, overturned the Ghiznian empire, and carried their arms as far as Benares. One of their

slaves founded the Mohammedan kingdom of Delhi about 1206. This country was overrun in the 13th and 14th centuries by the armies of Genghis Khan and Tamerlane. Its capital is Ghoor, which was taken by the king of Kharezim, and was subsequently sacked by the armies of Genghis and Tamerlane, from which it has never recovered, and is now scarcely known.

Ghorchana. The irregular Sikh yeomanry who served in the wars in the Punjab between the Sikhs and the English.

Ghyretty. Cantonments 14 miles from Calcutta. It is a palace built by Mr. Duplex, which the British took by force in 1797, and imprisoned the principal French colonists of Chandernagore there.

Giambeux. Greaves; armor for the legs, in ancient times. See JAMBEUX.

Giant Powder, or Dynamite. See DYNAMITE.

Giants, Battle of the. See BATTLE OF THE GIANTS.

Giberne (Fr.). A sort of bag in which the grenadiers held their hand-grenades. It was worn like a powder-flask.

Gibraltar. A fortified seaport town and garrison, occupying a promontory in the south of Spain, at the entrance from the Atlantic into the Mediterranean, 60 miles southeast from Cadiz. It consists of a high and rocky mountain running from north to south, about 3 miles in length, and three-fourths in width, its highest point being 1439 feet above the level of the sea. The "rock" was first fortified in the modern style in the reign of Charles V. It was surprised by the English under Sir George Rooke in 1704, soon after the commencement of the War of the Spanish Succession, and it has been a British dependency ever since. It has been repeatedly besieged, and always without success,—first in 1720, next in 1727, and lastly in 1779, when it stood a siege of upwards of three years and a half, the French and Spaniards using their utmost endeavors to capture it; but every effort was bravely repulsed by the governor, Gen. Eliott.

Gibraltar of America. See QUEBEC.

Gib-staff. In England, a staff to gauge water, or to push a boat.

Gin. In military mechanics, is a machine for raising great weights: it is composed of three long legs, one of them being longer than the rest, and called the *pry-pole*. The other two are kept at a proper distance by means of two iron bars fixed on one of the legs by a staple passing through a hole at one end; the other end has a hook which enters into a staple fixed into the other leg so as to be taken off or put on at pleasure. At about 3 feet from the bottom is a windlass, upon which the cable is wound; and the three legs are joined together at the top by an iron bolt, about which they move; to this bolt is also fixed an iron clevis to which is hooked the blocks and fall. When the gin stands upright with legs at a proper distance, one

end of the cable is fastened to a gun, mortar, or other weight; and the other passes through the pulleys and about the roller, which is turned round by means of hand-spikes passing through the holes in the end of the roller; whilst a man holds the cable tight, the gun is raised to the height required, so that the carriage may be put under it. The modern gin has a windlass with pawl and ratchet attachments. There are three different kinds of gins,—the *field and siege*, the *garrison*, and the *casemate* gins; and they only differ in their size and weight.

Gindî. Turkish horsemen, who perform extraordinary feats.

Gingals, Ginjauls, or Gingauls. Large muskets used in India by the natives, with a rest, somewhat similar to those invented by Marshal Vauban for the defense of forts.

Gingee. A strong town on the coast of Coromandel, once the capital of a kingdom of the same name, 85 miles from Madras. Towards the end of the 18th century, the Great Mogul unsuccessfully besieged this place for a period of three years. In 1750 it was taken by the French, who, in 1761, ceded it to the British.

Gionules (Fr.). Turkish volunteer cavalry, renowned for their bravery.

Girandole (Fr.). Any firework turning upon a wheel; a wheel whose circumference is studded with rockets.

Girandole (Fr.). In fortification, several chambers in mines connected for the defense of the place of arms of the covered way.

Girondists. An important party during the French revolution, principally composed of deputies from the Gironde. At first they were ardent republicans, but after the cruelties of August and September, 1792, they labored to restrain the cruelties of the Mountain party, to which they succumbed. Their leaders, Brissot, Vergniaud, and many others were guillotined October 31, 1793, at the instigation of Robespierre.

Gironné, or Gyronné. A term used in heraldry to indicate that the field is divided into six, eight, or more triangular portions of different trenches, the points of the triangles all meeting in the centre of the shield.

Gisarm. A scythe-shaped weapon, with a pike projecting from one side, formerly borne by foot-soldiers on the end of a long staff. It was used as late as the battle of Flodden. See **GUISARME**.

Gisors. A town of France, in the department of the Eure, 28 miles from Rouen. Here a battle took place October 10, 1198, between the French and English, in which the former were completely defeated. Richard I., who commanded the English, gave as the "*parole*," or watch-word of the day, *Dieu et mon droit* (God and my right), and ever since the expression has been the motto to the royal arms of England.

Gistes. Pieces of wood which are made use of in the construction of platforms to batteries, and upon which the madriers or broad planks are placed.

Gitschin. A walled town of Bohemia, about 50 miles northeast of Prague. It was captured by the Prussians after a severe conflict with the Austrians, June 29, 1866. Near Gitschin, the same evening, the crown-prince of Prussia was victor in another engagement.

Giurgevo. A town and river-port of Wallachia, opposite Rustchuk, and about 40 miles southwest from Bucharest, of which it is the port. In 1778 the Turks were defeated here by the Russians, who took it in 1811, and again in 1829, when its defenses were leveled with the ground. In 1854 the Russians were defeated in its neighborhood by the Turks.

Givet. A fortified town of France, in the department of Ardennes, on the Belgian frontier. This place was fortified by Vauban; the chief defensive works are Charlemont, the citadel, and the forts Notre Dame and St. Hilaire.

Glabrio. A family name of the *Acilia gens* at Rome. The *Acilii Glabrones* were plebeian, and first appear on the consular annals in 191 B.C., from which time the name frequently occurs to a late period of the empire. M. Acilius Glabrio, the most distinguished of the family, became consul in 191 B.C. In that year Rome declared war against Antiochus the Great, king of Syria. Glabrio was sent against him, and with the aid of his ally, Philip II., king of Macedonia, he speedily reduced to obedience the whole district between the Cambunian mountain-chain and Mount Ceta. Antiochus, alarmed at Glabrio's progress, entrenched himself strongly at Thermopylæ; but, although his Ætolian allies occupied the passes of Mount Ceta, the Romans broke through his outposts, and cut to pieces or dispersed his army. Glabrio was engaged in the siege of Amphissa, when his successor, L. Cornelius Scipio, arrived from Rome and relieved him from command. He was unanimously granted a triumph on his return to Rome.

Glacis. A slope of earth, usually turfed, which inclines from the covered way towards the country. Its object is to bring assailants, as they approach, into a conspicuous line of fire from the parapet of the fortress, and also to mask the general works of the place.

Gladiators. Were men who fought with swords in the amphitheatre and other places for the amusement of the Roman people. They are said to have been first exhibited by the Etruscans, and to have had their origin from the custom of killing slaves and captives at the funeral pyres of the deceased. The first exhibition of gladiators at Rome occurred in 264 B.C. They were at first confined to public funerals, but afterwards fought at the funerals of most persons of consequence. Combats of gladiators were also exhibited at entertainments. They consisted either of captives, slaves, and condemned malefactors, or of free-born citizens

who fought voluntarily. But it was in the amphitheatre that the combats of gladiators most frequently took place. Notice of the exhibition being given beforehand, thousands flocked to witness the spectacle. When a gladiator was vanquished by his antagonist, his fate depended upon the people, who by a sign indicated whether they wished him to be put to death or saved. Shows of gladiators were abolished by Constantine, but appear, notwithstanding, to have been generally exhibited till the time of Honorius, by whom they were finally suppressed.

Gladsmuir. A parish in Scotland, in the county of Haddington, in which the battle of Gladsmuir, or Prestonpans, was fought.

Glaire. A broadsword or a falchion fixed on a pike.

Glaïs, Militaire (Fr.). A military compliment which was paid to the remains of a deceased general. It consisted in a discharge of ordnance. It also signifies the funeral procession of a sovereign.

Glaive. Sword; a large blade fixed on the end of a pole, whose edge was on the outside curve; a light lance with a long sharp-pointed head. Also a knight, fully armed, with his squire. A kind of sword worn by peers in France in full dress.

Glaize. A kind of halbert, so called by the Saxons.

Glanders. A contagious and very destructive disease of the mucous membrane in horses, characterized by a constant discharge of sticky matter from the nose and an enlargement and induration of the glands beneath and within the lower jaw.

Glarus. A canton in the northeast of Switzerland. In the earliest times Glarus was reckoned sometimes as a part of Rhetia, sometimes as a part of Swabia, and was peopled by German settlers. After various changes it passed into the possession of the dukes of Austria, but ultimately secured its independence by the victories of Nafels in 1352 and 1388, when it joined the Swiss Confederation.

Glastonbury. A town of England, in Somersetshire, 25 miles from the city of Bath. It was anciently called Avalonia, or the Isle of Avalon, and no person whatever, not even a bishop or prince, was allowed to enter without leave from the abbot, to whom this power was granted by Canute the Dane. There were 61 abbots of Glastonbury, who sat among the barons in Parliament, and governed it successively for nearly 600 years. Richard Withering, the last, was condemned at Wells for refusing to surrender his abbey to King Henry VIII., and acknowledge his supremacy, and carried, with two of his monks, on a hurdle, to Tor Hill, a bleak hill close to the town, where he was hanged in his robes.

Glatz. A town of Prussia, capital of Glatz district; built on both sides of the Neisse, and is strongly fortified. This place surrendered to the Prussians in 1742, and

was taken by the Austrians in 1759, but restored at the peace of 1763. It was taken by Würtemberg and Bavarian troops in 1807. The celebrated Baron Trenck was confined in its fortress, but made his escape by leaping from the walls.

Glave. See GLAIVE.

Glazing Powder. See GUNPOWDER.

Glencoe. A valley of Scotland, in Argyleshire, noted for the military execution of its unsuspecting inhabitants, the MacDonalds, by a party of English soldiers, in 1692, in consequence of an order signed by William III. in council for that purpose, and issued contrary to the faith of a royal proclamation. Many of the inhabitants had been in arms for James II. during his attempts to recover the crown of England.

Glendale, Battle of. Also known as the battle of Frazier's Farm, and White Oak Swamp, and Charles City Cross-roads, Virginia, one of the "seven days' contests," was fought June 30, 1862, between the Army of the Potomac under Gen. McClellan, on its retreat towards the James River, and the Confederate forces under Gen. Longstreet. The battle commenced in the afternoon, and continued with fury well into the night, the Confederate loss being about 2000 men, and the Union loss about 1500. By next morning McClellan had his whole army in position on Malvern Hill, and communication with the James River was secured.

Glissade (Fr.). A term formerly applied to the forward or backward movement of the pike.

Globe Sight. A form of front sight used specially on target rifles. It consists of a pin with a small ball on the end of it, or a disk with a hole in it. For protection it is set in a tube open at both ends.

Gloire (Fr.). An artificial firework which resembles a large sun.

Glorious Virgin, or St. Mary the Glorious, Order of the. An order of knighthood in Venice, founded by Bartholomew of Vicenza in 1262. This institution was ecclesiastical as well as military; its objects were the protection of widows and orphans, and the furtherance of the peace of Italy. The badge was a purple cross between certain stars, and the costume a white surcoat on a russet cloak. An order of knighthood of St. Mary the Glorious also existed in Rome in the 17th century, whose purpose was the suppression of the Barbary corsairs who infested the Mediterranean.

Glory, Military. Honor, reputation, and fame acquired by military achievements. That precarious splendor which plays around the brows of a warrior, and has been collected by hard service, extraordinary genius, and unblemished integrity; but which may desert the greatest hero through one unfortunate failure, occasioned by the fatality of human imperfection.

Gloucester. A city and the capital of a county of the same name in England. It

became a Roman station under the name of *Colonia Glevium*, and an important town in Mercia under the Saxons, by whom it was called *Glean-Ceaster*,—whence its present name. Here the celebrated single combat between Edmund Ironsides and Canute is said to have taken place. It was repeatedly visited by William I.; afforded a refuge and support to Queen Matilda in her contest with Stephen; saw Henry III. crowned, and Parliaments held under Richard II. and Henry IV., and sided successfully with the Parliament in the civil war against Charles I.

Gloucestershire. A county of England, which, previous to the Roman invasion, was inhabited by a tribe called the Dobuni; and after that event, the county, or the greater part of it, was included in the province named *Flavia Caesarienes*. From the earliest of the Danish invasions down to the battle of Tewkesbury, in 1471, and to the civil wars between the crown and Parliament, Gloucestershire has been the scene of many and disastrous encounters. There are traces of British, Saxon, and Danish works in the county.

Glove. A cover for the hand, or for the hand and wrist, with a separate sheath for each finger. *To throw the glove*, an old expression which formerly meant to challenge to single combat.

Glückstadt. A town of the German empire, capital of the duchy of Holstein, on the Elbe, 82 miles below Hamburg. It was founded in 1620 by Christian IV. of Denmark, and fortified. During the Thirty Years' War, it successfully withstood three sieges; its fortifications were demolished in 1815.

Glycerine, Nitro-. See **EXPLOSIVES**.

Glyoxiline. See **EXPLOSIVES**.

Go. The verb "to go" is variously used in a military sense; as, to march in a hostile or warlike manner. *To go off* implies to depart from any post. *To go on* is to make an attack. *To go over* is to revolt. *To go out*, to go upon any expedition, etc. It was likewise frequently used to signify the act of fighting a duel; as, he went out with so and so.

Goa. A town of Hindostan, on the Malabar coast. It was formerly the capital of the Portuguese dominions in India. This place was taken by the Portuguese under Albuquerque in 1510; and by the English April 2, 1758.

Gobille (Fr.). A small copper ball, a quarter of an inch in diameter, several of which are put into a revolving cask for the purpose of more intimately incorporating the ingredients of powder, carcass, and rocket composition.

Gobisson, or Gambasson (Fr.). A quilted and padded dress worn under the habergeon.

Godesberg. A village of Rhenish Prussia, on the left bank of the Rhine, 4 miles south of Bonn. In 1582, Gebhard, the deposed archbishop, took refuge here, and intrusted the castle to a Dutch garrison. It

was, however, soon after taken possession of by his successor, on which occasion it sustained much injury. During the Thirty Years' War it was alternately in the possession of the Swedes and the Imperialists, and was finally almost demolished by the French.

Godolo. A market-town in Hungary. It was near here that the combined armies of Austria under Prince Windischgrätz and Count Jellachich were defeated in two bloody battles by the Hungarians under Görgei. On the eve of victory, Governor Kossuth held a conference with the generals Görgei, Klapka, and Damjanich for laying down the principles of the famous declaration of independence, issued April 14, 1849. It was this declaration which served the emperor of Russia as a pretext for the invasion of Hungary.

Gohud. A fortified town of Hindostan, in the territory of Gwalior; or possessions of the Scindia family. This place was taken from Bheem Singh by the Mahrattas about 1761. When this nation lost the battle of Paniput, the rannah of Gohud attempted to shake off their yoke, but was conquered by Ragoonauth Row in 1766, and compelled to continue tributary. On a subsequent rupture Gohud was taken by Scindia in 1784. Relinquished to Scindia by a treaty with Great Britain subsequent to 1804.

Goito. A small town in Lombardy, 15 miles northwest from Mantua. In 1680 this place was carried by assault by the Imperialists, who entered Mantua on the same night, and took it by surprise. During the War of the Spanish Succession in 1701, it was alternately captured by the allies and the Imperialists; and in 1796 the French took it, but were expelled, after a brief tenure, by the Austrians. In 1814, a severe engagement took place here between the Austrian and Italian troops; and during the war of independence in 1848, it became the theatre of two other battles between the same powers, to which it owes its modern celebrity.

Goladar, or Goldar. An East Indian term signifying a store-keeper, or store-house keeper.

Golandaazee, or Golandaussee. The Indian term of an artilleryman.

Golconda. A town of Hindostan, strongly fortified by nature and art, standing on a hill 5 miles northwest from Hyderabad. It was once noted for its diamonds. Golconda was once the capital of an extensive kingdom which arose on the dissolution of the Bhamenee dynasty, and was governed by native Hindoo princes; but being taken by Aurungzebe by treachery in 1687, after a siege of seven months, the whole territory became incorporated with the empire of Delhi.

Goldberg. A town in Prussian Silesia, on an affluent of the Oder, 12 miles southwest from Liegnitz. The French were defeated by the Prussians near this place in 1813.

Gold Coast Corps. A corps in the British service formed of drilled Africans, and officered from the West India regiments. It is kept up for the purpose of protecting the possessions of Sierra Leone and Gambia.

Gold Stick. A title given to the captain of the gentlemen-at-arms, or body-guard of the British sovereign, and to colonels of the Life Guards. When either of the regiments of Life Guards is given to an officer, he is presented by the sovereign with the gold stick. The colonels of the two regiments are in attendance on the sovereign alternately month and month. The one thus on duty is called *gold stick in waiting*; and all orders relating to the Life Guards are transmitted through him. See **SILVER STICK**.

Golden Fleece. A celebrated order of knighthood in Austria and Spain, founded by Philip III., duke of Burgundy and the Netherlands, at Bruges, January 10, 1429. The order was instituted for the protection of the Roman Catholic Church, and ranks next after the order of the Garter. The insignia of the Austrian order are a golden fleece hanging from a gold and blue enameled flint-stone emitting flame, and borne in its turn by a ray of fire. On the enameled obverse is inscribed *Pretium laborum non vile*. The Spanish decoration differs slightly from the Austrian.

Golden Horde. A name given to the Mongolian Tartars, who established an empire in what is now Southeast Russia about 1224, their ruler being Batou, grandson of Genghis Khan. They invaded Russia, and made Alexander Newski grand duke in 1252. At the battle of Bielawisch, in 1481, they were crushed by Ivan III. and the Nogay Tartars.

Gollette (Fr.). A shirt of mail formerly worn by foot-soldiers.

Gonfalon, or Gonfanon. An ensign or standard; colors.

Gonfalonier. A Turkish general and standard-keeper who always precedes the grand seignor during war.

Gong. An Indian and Chinese instrument of percussion, made of a mixture of metals, which produces a very loud, piercing sound on being struck by a wooden mallet. It is used by the Chinese as an instrument of martial music.

Gong Wallas. Militia in India; so called from *gong*, a village, and *wallas*, a man.

Goniometer. A general name for angle-measuring instruments.

Good-conduct Pay. Given in the British service as a stimulus to soldiers to conduct themselves with propriety. Soldiers who have not figured in the defaulters' book are entitled to extra pay, which goes on increasing at intervals upon the same condition of "good conduct." To mark the soldiers so distinguished, badges are given them in the form of rings of white lace, worn on the right arm. The receipt of good-conduct pay uninterruptedly for some years influences the amount of pension.

Goojerat. A village in the Punjab, India, the scene of the last stand made by the Sikh army against the British under Lord Gough, in 1849. In this action the Sikhs lost 53 guns, and their army of 60,000 men was entirely broken up and dispersed. The whole of the Punjab then fell under the British yoke.

Gordian Knot. It is said to have been made of the thongs that served as harness to the wagon of Gordius, a husbandman, afterwards king of Phrygia. Whosoever loosed this knot, the ends of which were not discoverable, the oracle declared should be ruler of Persia. Alexander the Great cut away the knot with his sword until he found the ends of it, and thus, in a military sense at least, interpreted the oracle, 330 B.C.

Goree. A town and small island, or rather rock, off the coast of Africa, a little more than a mile from Cape Verd. This island was first occupied by the Dutch, and afterwards taken by the French, to whom it was finally ceded by the treaty of Nimagueu, 1678. It is now the bulwark of the possessions of the French in Africa. Goree was taken by the British in 1768, 1779, 1800, and 1804.

Gorey. A town in the southeast of Ireland. Near here the king's troops under Col. Walpole were defeated, and their leader slain by the Irish rebels, June 4, 1798.

Gorge. The entrance into any piece of a fortification, which consists of the distance or space between the inner extremities of the two faces; as, between the faces of a half-moon, redoubt, bastion, redan, lunette, etc.

Gorge, Demi-. See **DEMI-GORGE**.

Gorge of a Bastion. In fortification, is usually an open space between the extremities of the flanks of the bastion. The larger this gorge is, the better is the defense; for when the ruined bastion is about to fall by siege into the hands of the enemy, the defenders can construct defensive works or dig small ditches in the gorge of the abandoned bastion. Such resistance sometimes drives the besiegers to the necessity of battering in breach the curtain.

Gorge of Mountains. Is the passage, more or less compressed, between two mountains, which is used as a passage-way into valleys. Gorges are important military points. If they lead to an intrenched camp, it is necessary to fortify them, and there post grand guards; these positions are the principal theatres for affairs of posts.

Gorged. In heraldry, when an animal is represented with a crown round its neck, it is said to be gorged.

Gorgerin (Fr.). In ancient times, that part of the armor which covered the neck of a man. Hence our word *gorget*.

Gorget (Ital. *gorgietta*, from *gorga*, a throat). That part of ancient armor which defended the neck. Also a crescent-shaped ornament formerly worn by military officers on the breast.

Gorgons. In military antiquity, a war-

like female nation of Lybia, in Africa, who had frequent quarrels with another nation of the same sex, called *Amazons*.

Gothard, St. The pass of St. Gothard is one of the best and most frequented routes across the Alps. On the northern slope is the celebrated Devil's Bridge across the Ruess. The French and Russians had several combats here in 1799.

Gothland. An island in the Baltic Sea. It was conquered by the Teutonic knights, 1397-98; given up to the Danes, 1524; to Sweden, 1645; conquered by the Danes, 1677, and restored to Sweden, 1679.

Goths. A warlike nation that inhabited the country between the Caspian, Pontus, Euxine, and Baltic Seas. They entered Mesia, took Philippopolis, massacring thousands of its inhabitants; defeated and killed the emperor Decius, 251; but were defeated by Claudius, 320,000 being slain. Aurelian ceded Dacia to them in 272; but they long troubled the empire. After the destruction of the Roman empire by the Heruli, the *Ostrogoths*, under Theodoric, became masters of the greater part of Italy, where they retained their dominion till 553, when they were finally conquered by Narses, Justinian's general. The *Visigoths* settled in Spain, and founded a kingdom, which continued until the country was subdued by the Saracens.

Gotthard, St. Near the river Raab, Hungary. Here the Turks under the grand vizier Kupriuli were totally defeated by the Imperialists and their allies, commanded by Montecuculli, August 1, 1684. Peace followed this great victory.

Goudrons (Fr.). Small fascines, or fagots, which are well steeped in wax, pitch, and glue, and then are lighted for the purpose of setting fire to beams, planks, traverses, galleries, pontons, etc. They are likewise used in various shapes and ways, to convey light into the ditches, or upon the ramparts.

Goujat (Fr.). A soldier's boy. It likewise signifies an ignorant, good-for-nothing fellow.

Gourdin (Fr.). A flat stick, two fingers in breadth, which was used by the French to punish galley-slaves.

Government. The Constitution of the United States provides that Congress shall make rules for the government and regulation of armies. By government is understood not only the body of fundamental laws of a state, but also the body of persons charged with the management of the executive power of a country; direction, power or authority which rules a community; administration; rule; management. Government of the military is that branch of the code which embraces the creation and regulation of the military hierarchy, or the gradual distribution of inferior authority. The power of making rules of government is that of *supreme command*, and from this living principle proceed the localization of troops, their organization and distribution; rules for rewards and punishments; and generally, all

rules of government and *regulation* whatsoever, which the legislature may judge necessary to maintain an efficient and well-disciplined army. All authority over the land forces of the United States must, therefore, be derived from Congress. For, although the President is the commander-in-chief, yet his functions, as such, must be regulated by Congress, under the 17th clause of Sec. 8 of the Constitution, as well as under the general authority of Congress to make rules for the government and regulation of the land forces. The President cannot be divested of power which Congress may assign to any inferior military commander, because the authority of the greater includes that of the less. But all the authority over the land and naval forces, save the *appointment* of the commander-in-chief, rests with Congress, and no authority can be exercised not delegated by Congress, except such as may be fairly deduced from powers given for the effective discharge of the duties annexed to his office.

Government's Island. See **ROCK ISLAND**.

Governor. An officer placed by royal commission in the military command of a fortress, not only over the garrison but over the inhabitants. In time of war it is an office of great responsibility, and at all times requires considerable experience and military information. Also, in the United States, one who is invested with supreme authority in a State.

Governor's Island. An island in New York harbor, about a mile and a half south of the City Hall. It belongs to the United States, and is strongly fortified by Fort Columbus, Castle Williams, and a battery commanding the entrance to Buttermilk Channel, the channel which separates the island from Brooklyn. The ordnance department has a depot here. It is now the headquarters of the military division of the Atlantic.

Gowrie Conspiracy. One of the most singular events in the history of Scotland took place in August, 1600. John Ruthven, earl of Gowrie, and others entered into a conspiracy to possess themselves of the king's (James VI.) person, to convey him to England and to administer the government in the interest of the Presbyterian leaders at home. They succeeded in enticing the king to the Gowrie House at Perth, and after they had held him as a prisoner were almost successful in dismissing his attendants without exciting suspicion; but the king crying out for assistance his voice was instantly recognized; his attendants hastened to the rescue, and quickly dispatched the earl and his brother Alexander.

Grade. Synonymous with rank; peculiarly applicable to the different ranks among officers, beginning from an ensign to the commander-in-chief of an army.

Gradivus. A surname of Mars (which see).

Grain. See **FORAGE**.

Grainoir, or Grénoir (*Fr.*). A term used in the French artillery to signify a sort of sieve, in which there are small round holes for moist powder to be passed through, in order to make the grains perfectly round.

Gran. A town of Hungary, on the right bank of the Danube, 25 miles northwest of Pesth. It is one of the oldest towns of Hungary, was formerly fortified, and has undergone assaults and sieges almost without number.

Granada. A city of Southern Spain, founded by the Moors in the 8th century. It formed at first part of the kingdom of Cordova. In 1286, Mohammed-al-Hamar made it the capital of his new kingdom of Granada, which was subjugated by the "great captain," Gonsalvo de Cordova, in 1492. Granada was taken by Marshal Soult in 1810, and held till 1812.

Granada, New. The name formerly given to the republic now known as the United States of Colombia (which see).

Grand. This word is frequently used, both in French and English, to indicate superiority of position, force, or display; as *grand master*, *grand army*, *grand march*, *grand parade*, etc.

Grand Division. A battalion or regiment being told off by two companies to each division, is said to be told off in grand divisions; hence, grand-division firing is when the battalion fires by two companies at the same time, and is commanded by one officer only.

Grand Guard. The main guard of an army; the guard covering the army or camp from an attack by the enemy; other guards are called *interior guards*.

Grand Master. The title of the head of the military orders, the Hospitallers, the Templars, and the Teutonic knights.

Grand Master of Cross-bows. The *personnel* of the French artillery was for a long time prior to 1420 retained, together with the engineers, under the general direction of an officer who was titled "grand master of cross-bows." In 1420 the master-general of artillery was made independent of this officer.

Grand Rounds. See **ROUNDS**.

Grand Tactics. See **TACTICS**.

Granicus. A river in Northwestern Asia Minor, near which, on May 22, 384 B.C., Alexander the Great signally defeated the Persians. The Macedonian troops (30,000 foot and 5000 horse) crossed the Granicus in the face of the Persian army (600,000 foot and 20,000 horse). Sardis capitulated, Miletus and Halicarnassus were taken by storm, and other great towns submitted to the conqueror.

Granson, or Grandson. A town of Switzerland, canton of Vaud, on the southwest shore of the Lake of Neuchâtel, 20 miles north of Lausanne. Near it the Burgundians under Charles the Rash were defeated by the Swiss with great loss, March 8, 1476.

Granville. A fortified seaport of France,

in the department of La Manche, on a rocky peninsula 12 miles northwest from Avranches. In 1695 this place was burned by the English, and in 1793 it was besieged by the Vendéans.

Grape-shot. A certain number of iron balls, usually nine, put together by means of two cast-iron plates, two rings, and one pin and nut. Each plate has on the inside three beds for the shot, of a depth equal to half the thickness of the plate and of the form of a spherical segment, the curvature of which is the same as that of the shot. An iron pin riveted to the bottom iron plate passes through the centre and also through the top plate, where the whole is secured by a nut and screw. In the United States the use of these shot for field-pieces has been discontinued, canister answering the purpose. (See **CANISTER-SHOT**.) In the old pattern, the balls were placed in tiers around an iron pin attached to an iron tampon at the bottom, put into a canvas bag, and then quilted around with a strong cord.

Grapple. To seize; to contend in close fight; to attach one's self as if by a grapple, as in wrestling; hence to *grapple with*, to enter into contest with, resolutely and courageously.

Grappling. A laying fast hold of; also, that by which anything is seized and held.

Grasp. The handle of a sword, and of an oar. Also, the small part of the stock of a musket.

Grass-cutters. Followers of cavalry regiments in India, whose duty it is to go forth and collect green forage for the horses.

Grassin (*Fr.*). An ancient name for militia composed of light troops.

Gratification. In a general acceptation of the term, this word meant, among the French, certain rewards which generals gave to the troops, after a severe engagement, in testimony of their valor and good conduct. These rewards were distributed according to rank. This custom was prevalent in the most ancient times. By gratification was likewise meant the accumulation of a certain sum, which was deposited for the specific purpose of burying a deceased soldier. This term also meant a certain allowance in money allotted to prisoners of war.

Gratuity. An allowance to officers of the British service in the Indian army, varying with their rank. This and other allowances, such as batta, tentage, etc., had been granted for the purpose of augmenting an officer's emoluments in India, without giving him a claim to a higher rate of net paper when on furlough in England. Gratuities are allowed to officers in the French service at the beginning of a campaign.

Gravelines. A small fortified town and seaport of France, in the department of Nord, 12 miles southwest of Dunkirk. Here Count d'Egmont obtained a victory over the French army commanded by Marshal de Thermes in 1558. Ten years later, it was taken by Louis XIV., who had it fortified by Vauban.

Gravelotte, Battle of. Also called the battle of Rézonville, the bloodiest battle of the Franco-German war, took place August 18, 1870. It was gained by the German armies, commanded by the king in person, after twelve hours' hard fighting. The most desperate struggle took place on the slopes over Gravelotte, which the Germans gained by nightfall, after repeated charges, the fortune of the day being long in suspense. But the right of the French had been outflanked, they fell back fighting to the last, and retired under cover of Metz. The French are said to have lost 19,000, including officers and men, besides a large number of prisoners; and the Germans, 25,000.

Graveurs (Fr.). Persons employed and paid by the founders of cannon for repairing damaged pieces of artillery. Some individual, however, was distinguished by the name of *graveur de l'artillerie* (engraver to the artillery), and was permitted by the grand master of the ordnance to exhibit over his shop door the arms of the royal artillery.

Gravimetric Density of Gunpowder. Is the weight of a measured quantity.

Gravity. Is the tendency of all bodies towards the centre of the earth. The force of gravity is in the inverse proportion to the square of the body's distance from the centre of the earth. The specific gravity of a body is the ratio of the weight of a body to that of an equal volume of some other body assumed as a standard, usually pure distilled water at a certain temperature for solids and liquids, and air for gases.

Graze. The point at which a shot strikes and rebounds from earth or water. *Grazing-fire*, that which sweeps close to the surface it defends.

Great Britain. See BRITAIN, GREAT.

Great-coat. A soldier's overcoat is so called.

Great Fortification. One of the divisions of the first systems of Vauban. It consists in a fortification whose exterior side is from 185 to 260 toises, or from 870 to 520 yards, and is seldom adopted but towards a river or a marsh.

Great Radius. In fortification, the whole oblique radius.

Greaves. Were a kind of armor for the legs, worn both by the Greek and Roman soldiers; the latter having adopted them from the former. They were made of brass, copper, tin, or other metals. The sides were closed about the ankles with buttons of gold, silver, etc. This kind of defensive armor was at first peculiar to the Grecians. The Etruscans had them, apparently of rough hides, fastened behind by a single ligature near the middle of the calf; these subsequently gave way to buskins. Servius Tullius introduced the Etruscan greaves among the Romans; but from the time of the republic the word *ochrea* applied to the laced-up boots, which succeeded them.

Greece, or Hellas, Kingdom of. The ancient Græcia, a maritime country in the

southeast of Europe. In the early ages the Greeks were governed by monarchs; but the monarchical power gradually decreased, and the love of liberty led to the establishment of the republican form of government. No part of Greece, except Macedonia, remained in the hands of an absolute sovereign. The expedition of the Argonauts first, and, in the succeeding age, the wars of Thebes and Troy, gave opportunity to their warriors, who afterwards ranked as heroes and demigods, to display their valor in the field of battle. The spirit of Greece, however, was crushed by the Romans; and in 1718 she became a Turkish province. In 1821 the ancient spirit seemed to have revived in the modern Greeks, and they determined to be free. The struggle was severe and protracted; but, by the interference of the great European powers, the Turks were forced to acknowledge Greece an independent state in 1829.

Greek Fire. A combustible composition (now unknown, but thought to have been principally naphtha), thrown from engines said to have been invented by Callinicus, an ingenious engineer of Heliopolis, in Syria, in the 7th century, in order to destroy the Saracens' ships, which was effected by the general of the fleet of Constantine, Pogonatus, and 80,000 men were killed. A so-called "Greek fire," probably a solution of phosphorus in bisulphide of carbon, was employed at the siege of Charleston, U. S., in September, 1863. Greek fire, as now understood, is simply a solid, highly combustible composition, consisting of sulphur and phosphorus dissolved in the bisulphide of carbon, to which occasionally some mineral oil is added, with the view of increasing its incendiary powers. When the liquid is thrown on any surface exposed to the air the solvent evaporates, leaving a film of the phosphorus or sulphide of phosphorus, which then inflames spontaneously. The proper mode of extinguishing such a fire is to throw damp sand, ashes, sawdust, or lime, wet sacking or carpeting; in short, any material which will exclude the air from the fire. No attempt should be made to remove the covering for some time after the flame has been extinguished. The place should afterwards be thoroughly washed by a powerful jet of water forced upon it.

Greener's Bullet. One of the first attempts to make a bullet take the grooves by the expanding action of the powder was by Mr. Greener, an English gunsmith, in 1836. He used a conical pewter wedge, which was driven into a cavity in the base of the bullet by the powder and forced the outer walls of the bullet into the grooves.

Grenada. An island in the West Indies belonging to the Windward group. It was discovered by Columbus in the year 1498. It was originally settled by the French, but was taken by the British in 1762, to whom it was confirmed by the peace of Paris in 1763.

Grenade. In gunnery, is a shell thrown from the hand, or in barrels from mortars of large caliber, and ignited as other shells by means of a fuze. There are hand-grenades and rampart-grenades; old 6-pounder spherical-case may be used for the former, and shells of any caliber for the latter. Grenades are useful in the defense of works, the smaller, thrown by hand into the head of a sap, trenches, covered way, or upon the besiegers mounting a breach; the larger kinds are rolled over the parapet in a trough. Hand-grenades are intended to be used against the enemy when he has reached such parts of the defenses (the bottom of the ditch for example) as are not covered by the guns, or the muskets of the infantry posted on the banquettes. After the enemy has passed the abatis and jumped into the ditch, hand-grenades will be used; and then if he mounts the parapet, he must be met there with the bayonet. *Ketchum's hand-grenade* is a small oblong percussion shell which explodes on striking the object.

Grenadier. Originally a soldier who was employed in throwing hand-grenades, but in some modern armies a member of the first company of every battalion of foot, in which the tallest and finest men of the regiment are placed.

Grenadier Guards. The first regiment of foot guards in the British Household Brigade of Guards, and generally considered the finest corps in the army. It comprises 2697 officers and men, divided into three battalions. The officers of this fashionable corps are usually from the families of the nobility, or more distinguished landed gentry. The 1st Foot Guards, under which name the regiment was originally known, was first raised in 1660. The Grenadier Guards distinguished themselves in the Peninsula, at Waterloo, and in the Crimea.

Grenadiers Auxiliaries (Fr.). Auxiliary grenadiers. During a siege, and when a place was closely invested, a certain number of grenadiers were chosen out of the battalions belonging to the trenches, for the purpose of making head against the besieged, whenever they might risk a sally, or assault the works. It was the peculiar duty of these men to stand forward on every occasion, to set fire to the gabions attached to the batteries, and to crush every attempt which might be made by the garrison to annoy the men that were posted in the trenches, etc.

Grenadiers, Horse. Called by the French *grenadiers volans*, or flying grenadiers, are such as are mounted on horseback, but fight both on foot and on horseback. They were first established in France by Louis XIV. in 1676, and formed in squadrons.

Grenado. The ancient term for a live shell.

Grenoble. A fortified town of France, in the department of the Isère. The town is surrounded with fortifications, and the heights which command the town are also fortified. This was the first place which

openly received Napoleon I. on his escape from Elba, in 1815.

Gribeauval's System of Artillery. About 1765 various improvements were introduced into European artillery by Gen. Gribeauval. He separated *field* from *siege* artillery, lightened and shortened field-guns and diminished the charges. He adopted elevating screws and tangent scales, strengthened the carriages, and introduced neater uniformity in the dimensions, enabling spare parts to be carried for repairs.

Grices. In heraldry, are young wild boars.

Griffe (Fr.). Means literally a claw; but in a military sense, as accepted by the French, it signifies an iron instrument which is made like a hook, and is used by miners to pick out the small stones that are incorporated with cement, etc.

Griffin. A fabulous animal, usually represented in heraldry with the body and hind legs of a lion, and the beak, wings, and claws of an eagle.

Griffin Gun. A name sometimes given to the 3-inch rifle used in the U. S. field service from its inventor, Mr. Griffin, of the Phoenixville Iron-Works, Pa., where the gun was made.

Grip. The handle of a sword.

Grisons. The largest of all the cantons of Switzerland. The country was anciently inhabited by the Rhetii; it was conquered by the Roman emperor Constantius in the 4th century, and his camp (*Curia, Chur, or Coire*, the name of the present capital) was planted on the Rhine. In the 10th century the country of the Grisons was added to the German empire, and remained till 1268 subject to the Swabian dukes. With the decay of the imperial authority it came to be oppressed by a numerous nobility, the ruins of whose castles still crown the heights. Against them the people began, in the end of the 14th century, to form leagues in the different valleys. In 1472, these separate unions entered into a general confederation, which then formed an alliance with the Swiss cantons, but it was not till 1803 that it was admitted into the Swiss Confederation as the fifteenth canton. Grisons was over-run by the French in 1798 and 1799.

Grochow. Near Prague, a suburb of Warsaw. Here took place a desperate conflict between the Poles and Russians, February 19-20, 1831, the former remaining masters of the field of battle. The Russians shortly after retreated, having been foiled in their attempt to take Warsaw. They are said to have lost 7000 men, and the Poles 2000.

Grognard (Fr.). Grumbler; an old soldier of the French empire was so called.

Groma (Fr.). A Roman measuring-rod, 20 feet long, used for setting off distances in a camp.

Grommet. Consists of a ring of rope-yarn, with two pieces of strong twine tied across at right angles to each other. Grom-

metae are used as wads for cannon. The size of the ring is the full diameter of the bore of the piece, in order that it may fit tight, and stop the windage. They increase the accuracy of fire, and are to be preferred when the object of the wad is merely to retain the projectile in its place, as in firing at a depression. They stop the windage best when placed behind the projectile.

Groom. One of several officers of the English royal household, chiefly in the lord chamberlain's department; as the groom of the chamber; groom of the stole, or robes.

Groom-porter. An officer in the household of the king of England, who succeeded the master of revels, and gave directions as to sports.

Grooved Ball. See PROJECTILE.

Grooved Bullet. See BULLET.

Grooves. Spiral grooves or "rifles" cut into the surface of the bore of fire-arms, have the effect of communicating a rotary motion to a projectile around an axis coincident with its flight. This motion increases the range of the projectile, and also corrects one of the causes of deviation by distributing it uniformly around the line of flight. There are two kinds of twist used,—uniform and increasing. Increasing twists are supposed to give greater accuracy, and are well adapted to expanding projectiles which have but short bearing in the grooves. They are also used for stud projectiles. The uniform twist is generally applicable and has many advantages. In small-arms at the present time the bullet used has such a long bearing in the grooves that an increasing twist is not desirable. The ordinary twist is right-handed, giving a *drift* to the right. The *gras*, the official arm of France, has a left-handed twist. In regard to number and form of grooves authorities differ. The polygroove (or many small grooves) system has given very accurate results, especially in breech-loading cannon. It is in great favor on the continent of Europe. The French system, also used in a modified form in Woolwich and Elswick guns, consists of a few deep grooves in which the studs of the projectile move. The objection to this system is the weakening of the gun and the great strain when fired. For expanding projectiles, experiment shows that broad and shallow grooves with a moderate twist give range, endurance, accuracy of fire, and facility in loading and cleaning the bores. The proper twist to be given to the grooves depends on the length, diameter, and initial velocity of the projectile used; the most suitable twist is best determined by experiment. Other things being equal, the longer the projectile the more rapid the rotation necessary to steady it; the greater the diameter the less rapid the rotation. As the initial velocity is increased, the rotation must be increased. The farther forward the centre of inertia of the projectile, the less the tendency to tumble. The tendency in modern small-arms is to shorten the twist on

account of large charges and long bullets. Grooved bullets are best suited to broad shallow grooves; patched bullets to a greater number of sharp-edged grooves.

Gros (Fr.). A body of soldiers; a detachment. The French frequently say, *Un gros de cavalerie*, a body of cavalry; *un gros d'infanterie*, a body of infantry.

Gros Ventres Indians. A tribe of aborigines living in Dakota and Montana. They received their name Gros Ventres, "Big Bellies," from the Canadian *voyageurs* of the Hudson Bay Company. They are peaceably disposed, and are mostly located at Fort Berthold agency, Dakota, and at Fort Peck, Montana. See INDIANS AND THEIR AGENCIES.

Groton. A village of New London Co., Conn., on the east side of Thames River, opposite New London. It is famous as being the scene of the massacre perpetrated by British troops under Arnold. Old Fort Griswold, commanded by the brave Ledyard, who was barbarously slain with his own sword after he had surrendered, is still standing on Groton Heights; and a granite obelisk has been erected to commemorate the patriotism of those who perished.

Ground. In a military sense, the field or place of action. *To take ground*; a battalion or company is said to take ground when it extends in any given direction. This term is likewise used in dueling; as, they took their ground at eight or ten paces from each other.

Ground Arms. An old word of command, on which the soldiers laid down their arms upon the ground.

Ground-work. See FOUNDATION.

Grynia, or Grynium. A very ancient fortified city on the coast of the Sinus Elicius, in the south of Mysia. Parmenio, the general of Alexander, destroyed the city and sold the inhabitants as slaves, after which the place seems to have decayed.

Guadaloupe. An island in the West Indies, and one of the largest and most valuable of the Leeward group. This island was first discovered by Columbus. It was taken possession of by the French in 1635, who drove the natives into the mountains. In 1769 it was taken by a British squadron, and was restored to France at the peace of 1763. It was again taken by the British in 1794; but was retaken by the French in 1795. In 1810 the British once more took possession of it, and in 1814 restored it to the French, to whom it now belongs.

Guad-el-ras. In Northwestern Africa. Here the Spaniards signally defeated the Moors, March 23, 1860, after a severe conflict, in which Gen. Prim manifested great bravery, for which he was ennobled.

Guanches. The original inhabitants of the Canary Islands, who were supposed to have come from the adjoining coast of Africa. In the 15th century many of these people fell in opposing the Spanish invasion; many were sold by the conquerors as slaves, and

many conformed to the Roman Catholic faith, and intermarried with the Spaniards; so that all trace of them as a distinct race is lost. They were celebrated for their tall stature, and were styled by Humboldt the Patagonians of the Old World.

Guarantee Association, The British. An association which, for a small percentage, undertakes to vouch for the prudence and fidelity of such public officers (military) as paymasters, ordnance store-keepers, commissaries, staff-officers of pensions, barrack-masters, etc. The government accepts the guarantee of this particular office in preference to that offered by private individuals.

Guard. A body of men whose duty it is to secure an army or place from being surprised by an enemy. In garrison the guards are relieved every day. *On guard* is being engaged on guard duty.

Guard, Advanced. See **ADVANCED GUARD**.

Guard, Baggage. A guard who has the care of the baggage on a march.

Guard-chamber. A guard-room.

Guard, Counter-. See **COUNTER-GUARDS**.

Guard, Detail. The men from a company, regiment, or other organization detailed for guard duty.

Guard, Dismounting. The act of coming off guard.

Guard, Forage. A detachment sent out to secure foragers. They are posted at all places where either the enemy's party may come to disturb the foragers, or where they may be spread too near the enemy, so as to be in danger of being taken. This guard consists both of horse and foot, who must remain on their posts till the foragers are all come off the ground.

Guard, Grand. The main guard of a camp or army. See **GRAND GUARD**.

Guard-house. A building occupied by the guard. The prisoners being kept in the building, it is frequently used as a synonym for prison-room or lock-up. *To take one to the guard-house*, is to confine him.

Guard, Magazine-. See **GARDES-MAGAZINE**.

Guard, Main. Is that from which all other guards are detached, and constitutes the chief guard of a garrison.

Guard Mess. Is the table which is kept for the officers of the Life and Foot Guards in St. James' Palace. The sum of £4000 per annum is allowed for the mess.

Guard Mounting. The act of going on guard. The military ceremony of marching on guard.

Guard of Honor. A guard drawn up to receive eminent personages, as a mark of respect, or to accompany them.

Guard, Picket. An outpost guard for the purpose of preventing a surprise.

Guard, Police. The interior guard of a camp or army in charge of arms, property, tents, etc. Also a guard in charge of prisoners engaged in policing a camp or garrison.

Guard, Provost-. See **PROVOST-GUARD**.

Guard, Quarter. The guard which is posted in front of a camp.

Guard, Rear-. The guard posted in rear of a camp. It also means the body of troops which, when troops are on the march, bring up the rear, and hold a pursuing enemy in check.

Guard Report. The report which the non-commissioned officer or officer in charge of the guard sends in on dismounting. It contains a statement of duties performed, of hours at which the guard was visited by the officer of the day or field-officer, a list of government property and its condition, and also of the prisoners handed over to the guard, with the charge against each, together with the name of the officer by whom the prisoner was confined.

Guard Tent. Tent occupied by the guard.

Guardable. Capable of being guarded or protected.

Guardiagrele. An old town of Southern Italy, in the province of Chieti. Belisarius surrounded it with a turreted wall as a defense against the Goths. It was often besieged during the Middle Ages, and in 1799 was mercilessly sacked and burned by the French.

Guards. In the British service constitute in time of peace the garrison of London, and the guard of the sovereign at Windsor. The Guards compose what is called the Household Brigade, and include in cavalry the 1st and 2d Life Guards, and the Royal Horse Guards; and in infantry the Grenadier Guards, the Coldstream Guards, and the Scots Fusilier Guards. The officers of the regiments of Foot Guards hold higher army rank than that they bear regimentally,—that is, ensigns rank with lieutenants of other regiments, lieutenants with captains, and so on.

Guards, Imperial. The name of a body of select troops organized by the French emperor, Napoleon I., which greatly distinguished themselves at Austerlitz.

Guards' Institute. An establishment in London; it consists of reading-, lecture-rooms, etc., for all officers and soldiers in the metropolis. It was inaugurated by the Duke of Cambridge, July 11, 1867.

Guards, The Horse Grenadier. Formerly a body of horse guards in the British service; the first troop was raised in 1698, and the second in 1702. This corps was reduced in 1788, the officers retiring on full pay.

Guastadours (Fr.). Turkish pioneers. Armenians and Greeks are generally employed in the Turkish armies to do the fatigue-work that is necessary for the formation of a camp, or for conducting a siege.

Guastalla. A city in Northern Italy, near which the imperial army, commanded by the king of Sardinia, was defeated by the French, September 19, 1784. The ancient district of that name, long held by the dukes of Mantua, was seized by the emperor of Germany, 1746, and ceded to Parma, 1748. After having been comprised in the Italian republic,

1796, and subjected to other changes, it was annexed to Parma, 1815, and to Modena, 1847.

Guatemala. A republic in Central America, declared independent March 21, 1847. A war between Guatemala and San Salvador broke out in January, 1863, and on June 16 the troops of the latter were totally defeated.

Guatuso Indians. A tribe of aborigines living on the Rio Frio, in Central America. They are said to be a brave and warlike race.

Gubbio (anc. Iguvium). A city of Central Italy, 27 miles south of Urbino, on the southern declivity of the Apennines. It bore a conspicuous part in the beginning of the civil war between Caesar and Pompey, when it was occupied by the prætor Minucius Thermus with five cohorts; but on the approach of Curio with three cohorts, Thermus, who was apprehensive of a revolt of the citizens, abandoned the town without resistance.

Gudda. An Indian term for a fool; also a small fort erected upon a hill or eminence.

Guelphs and Ghibellines. Names given to the papal and imperial factions who destroyed the peace of Italy from the 12th to the end of the 15th century (the invasion of Charles VIII. of France in 1495). The origin of the names is ascribed to the contest for the imperial crown between Conrad of Hohenstaufen, duke of Swabia, lord of Wiblingen (hence *Ghibelin*), and Henry, nephew of Wolf, or Gueff, duke of Bavaria, in 1188. The former was successful; but the popes and several Italian cities took the side of his rival. *Hie Gueff* and *Hie Ghibelin* are said to have been used as war-cries in 1140, at the battle before Weinsberg, in Würtemberg, when Gueff of Bavaria was defeated by the emperor Conrad IV., who came to help the rival duke, Leopold. The Ghibellines were almost totally expelled from Italy in 1267, when Conrad, the last of the Hohenstaufens, was beheaded by Charles of Anjou. Guelph is the name of the present royal family of England.

Guelphs, Order of. An order of knighthood for Hanover, instituted by George IV., when regent, on August 12, 1815. It is both a military and civil order, unlimited in number, and consisted originally of three classes,—Knights Grand Cross, Commanders, and Knights; but in 1841 another class of simple members was added to the order.

Guerite (Fr.). A sentry-box, small turret. In fortified towns there are several small turrets of this denomination, which are sometimes made of wood, and sometimes built with stones. They are generally fixed to the acute points of bastions, and sentinels are posted within them for the purpose of watching the ditch, and of preventing any surprise in that quarter.

Guerre (Fr.). War; warfare; art of war; dissension; strife. *En guerre*, at war; in action; ready for action; a piece of ordnance unlimbered, trunnions shifted, and everything made ready for firing.

Guerrillas (Sp. *guerra*, "war"). The name given to armed bands, who on occasion of foreign invasion or civil wars, carry on an irregular warfare on their own account. The name was first applied in Spain to irregular soldiery. From 1808 to 1814 they were regularly organized against the French, and being favored by the character of the country which they fought in, were successful on many occasions. In our late civil war many bands were organized in the Border States, and were a great annoyance to both armies. If guerrillas are taken captive in open warfare, they should be treated according to the usual customs of war, unless they are known to have been guilty of acts not tolerated in civilized warfare. In the Franco-German war, however, we find that the Germans refused to recognize as soldiers, or extend the privileges of war, to the *franca-tireurs*, a body of French volunteer sharpshooters, who, to a great extent, adopted this system of guerrilla warfare.

Guerrillero (Sp.). An irregular soldier; a member of a guerrilla band or party; a partisan.

Guet (Fr.). This term was particularly attached to those persons belonging to the French body-guard, who did duty during the night. It also signified rounds, or those duties of a soldier, or patrolling party, which are prescribed for the security of a town, etc., and to prevent surprises. It is also used in a military sense in conjunction with other words; as *guet à pied*, foot patrol; *guet à cheval*, horse patrol, etc.

Gueux (Fr.). "Beggars." A name applied by the Count of Barlaimont in 1566 to the confederated nobles and others of the Low Countries who opposed the tyrannies of Philip II. The malcontents at once adopted the title, and calling themselves *gueux*, for many years opposed the Spanish king by sea and land with varying success.

Guichet (Fr.). A small door or outlet, which is made in the gates of fortified towns. It is generally 4 feet high, and 2 broad, so that a man must stoop to get through. In garrison towns the guichet was left open for the space of one-quarter of an hour after the retreat, in order to give the inhabitants time to enter.

Guides. Generally the country people in the neighborhood where an army encamps. They give intelligence concerning the country, and the roads by which the enemy may approach. In time of war, particularly in the seat of it, the guides invariably accompany headquarters. Of late years it has been customary to form them into regular corps with proper officers at their head.

Guides. The name given to the non-commissioned officers, or other enlisted men, who take positions to mark the pivots, marches, formations, and alignments in modern discipline; the French call them *jalonneurs*, from *jalon*, a post.

Guides, Corps des (Fr.). The corps of guides. This body was originally formed

in France in 1756, and consisted of 1 captain, 1 first lieutenant, 2 second lieutenants, 2 sergeants, 2 corporals, 1 anspessade, and 20 privates, called *fusiliers-guides*. Another corps of guides was also formed in 1796. This corps now forms part of the imperial guard.

Guidon. A small flag or streamer, as that carried by cavalry, which is broad at one end, nearly pointed at the other, and usually of silk; or that used to direct the movements of infantry, or to make signals at sea. In the U. S. service, each company of cavalry has a guidon.

Guidon. One who carries a flag. Also, one of a community of guides established at Rome by Charlemagne to accompany pilgrims to the Holy Land.

Guyenne, or Guyenne. An old province in the southwest of France, lying to the north of Gascony. It was part of the dominions of Henry II. Philip of France seized it in 1293, which led to war. It was alternately held by England and France till 1453, when John Talbot, earl of Shrewsbury, in vain attempted to take it from the latter.

Guilford Court-house was situated about 5 miles northwest of Greensboro', N. C. Here an engagement took place between the British troops under Cornwallis, and the American forces, chiefly composed of inexperienced militia, under Gen. Greene, on March 15, 1781. The fight resulted in a partial victory for the royal troops, owing principally to the disorganization and flight of the North Carolina militia. Gen. Greene, not wishing to risk the annihilation of his army, retreated to Speedwell's iron-works, 10 miles distant. Cornwallis, however, did not attempt to pursue him, but fell back himself to Cross Creek (Fayetteville).

Guillotine. The instrument of decapitation introduced during the French revolution by the Convention, and named after its supposed inventor, J. I. Guillotin. It is composed of two upright posts, grooved on the inside, and connected on the top by a cross-beam. In these grooves a sharp iron blade, placed obliquely, descends by its own weight on the neck of the victim, who is bound to a board laid below. The invention of machines of this kind is ascribed to the Persians. In Italy, from the 18th century, it was the privilege of the nobles to be put to death by a machine of this kind, which was called *mannaia*. Machines of similar kind were used in Scotland and Holland for the purpose of decapitation.

Guinegate, Battle of. Or more familiarly, the "Battle of the Spurs," was fought at Guinegate, not far from Tournai, in the province of Hainaut, August 16, 1513, between the English under Henry VIII., assisted by a considerable body of troops headed by the emperor Maximilian, and the French under the Duc de Longueville. The latter were defeated. The battle received its familiar designation from the circum-

stance of the French knights having made better use of their *spurs* than of their *swords*.

Guisarme, or Gisarme (Fr.). An offensive weapon formerly used in France; it was a two-edged axe mounted upon a long handle, and sometimes called *voulque*. There were three kinds; the *glaive gisarme* had a sabre-blade with a spike, the *bill gisarme* a blade like a hedging-bill, and the *hand gisarme* was a kind of bill with a serrated back.

Guisarmiers (Fr.). Were French foot-soldiers (*piétons*) of the free archers, armed with the guisarme.

Gujerat, or Guzerat. A walled town of the Punjab, on the right side of the Chenab, about 8 miles from the stream. It is a place of some military importance, being on the great route between Attock and Lahore. Here on February 21, 1849, a Sikh army of 60,000 men was utterly defeated by a British force decidedly inferior in point of numbers.

Gules. The term by which the color red is known in heraldry. In engraving it is marked by perpendicular lines traced from the top of the shield to the bottom. It is supposed to indicate valor, magnanimity, and the like, and is regarded as the most honorable heraldic color.

Gun. In its most general sense, a gun is a machine, having the general shape of a hollow cylinder closed at one end, and used for the purpose of projecting heavy bodies to great distances by means of gunpowder. Technically, it is a heavy cannon, distinguished by its great weight, length, and absence of a chamber. It is used for throwing projectiles with large charges of powder to long distances, with great accuracy and penetration. Guns came into use in the 14th century, and were first fired from supports, and in reality were artillery. Shortly after, they took the form of a clumsy hand-gun, called an arquebuse, which was portable, but discharged from a forked rest. The next modification, which came into use about the end of the 14th century, was called the matchlock. The piece was discharged by a lighted match brought down on the powder-pan by the action of a trigger. This was superseded in 1517 by the wheel-lock, the fire being produced by the action of a toothed wheel upon flint or iron pyrites. Almost contemporary with this was the snap-hance gun, in which sparks were generated by the concussion of flint on the ribbed top of the powder-pan. About the middle of the 17th century the flint-lock began to be employed. This was a combination of the two latter weapons, but much superior to either. It continued universally in use until the early part of the present century, when the percussion-lock was invented, which by 1840 (the time of its adoption by the British government), had completely superseded it. As the lock improved, and the rapidity of firing increased, the weight of the piece diminished; the old tripod first used as a rest gave way to one stake, and finally, in the

18th century, was abandoned altogether. The weapon was then the smooth-bore musket, which continued in use with various modifications until the middle of the 19th century, when it was partially superseded by the rifle. (See SMALL-ARMS.) In their earlier stages cannon went by various names, as bombards, culverins, petronels, and later on were reduced to the three denominations, technically, of guns, howitzers, and mortars. For the two latter, see HOWITZER and MORTAR. Guns are subdivided in the U. S. service according to their use, into field, siege, and sea-coast guns. The field-guns consist of two rifle pieces; the 8-inch rifle, adopted in 1861, and the 3 $\frac{1}{2}$ -inch rifle, adopted in 1870 (see ORDNANCE, CONSTRUCTION OF), and the Napoleon gun, a 12-pounder smooth-bore, adopted in 1857. (See NAPOLEON GUN.) The only siege gun adopted by the United States is a 4 $\frac{1}{2}$ -inch rifle. The 30-pounder Parrott, so extensively employed in our service for siege purposes, is not a regulation gun. The sea-coast guns consist of 13-, 15-, and 20-inch smooth-bores, and 10- and 12-inch rifles. An 8-inch rifle has been constructed by converting the 10-inch smooth-bore according to the Palliser or Parsons method. The 18-inch smooth-bore and the 10- and 12-inch rifles are regarded as experimental guns. The guns principally in use for the land and sea forces of the United States are those known as the Columbiad, or Rodman, Dahlgren, Gatling, Hotchkiss, Napoleon, Parrott. (For particular descriptions, see appropriate headings.) In the British service they are the Armstrong, Palliser, Woolwich, or Fraser, and the Lancaster, Mackay, and Whitworth; the three latter being now very little used. (See appropriate headings.) The only breech-loader in general use in Europe is the Krupp, which is largely employed for all purposes by Germany and Russia. See KRUPP GUN.

Gun, Curricie. Is a small piece of ordnance, mounted upon a carriage of two wheels, and drawn by two horses. The artilleryman is seated on a box, and the whole can be moved forward into action with astonishing rapidity. The tumbrils belonging to curricie guns carry 60 rounds of ball cartridges. This gun is no longer in general use.

Gun Factories, Royal. Are government establishments in England, at Woolwich, and Elswick, near Newcastle-on-Tyne, for the construction of great guns for the use of the British army and navy.

Gun-barrel. The barrel or tube of a gun. Gun-barrels were formerly made on the coiled principle, and this method is still largely followed in thin barrels like those of shot-guns. The superior kinds of shot-gun barrels are known as *stub*, *stub-twist*, *wire-twist*, *laminated*, etc.

Stub-iron is made from horseshoe nails cleaned by tumbling and mixed with a small proportion of steel scrap. It is then pud-

dled and put through various processes, which end in the production of a flat bar called a *skelp*.

Twist is the term applied to *coiled barrels*. The iron or steel is made into a ribbon, which is wound spirally around a mandrel and welded.

Stub-twist is stub-iron coiled.

Wire-twist is made by welding iron and steel bars together, or two qualities of iron, and drawing the compound bar into a ribbon, which is coiled as before described. The term is specially applied to coiled barrels made from small ribbons.

Damascus iron is made by twisting compound bars of steel and iron, welding several of the twisted bars together and forming a ribbon from the mass.

Laminated is the term applied to barrels made from compound bars.

In twist-barrels, the ribbon is several yards long, about half an inch wide, and thicker at the breech than at the muzzle end. It is heated to redness, wound on the mandrel, then removed and heated to the welding-point slipped over a rod with a shoulder at the lower end. The rod is then dropped vertically several times on a block of metal, which welds the spiral edges together. This is called *jumping*. The welding is completed by hammering.

Rifle-barrels and the cheaper kinds of shot-gun barrels are made directly from the *skelp*, which is passed between rollers, which first bend the plate longitudinally and afterwards convert it into a tube. The tube is then heated to a welding heat, a mandrel is pushed into it, and it is passed through the welding rolls, which weld the edges and at the same time taper and lengthen the tube. The boring and turning are done in lathes.

Gun-carriage. See CARRIAGE.

Gun-carriage, Barbette. See BARBETTE CARRIAGE.

Gun-carriage, Field. See FIELD-CARRIAGE.

Gun-carriage, Flank Casemate. See FLANK CASEMATE CARRIAGE.

Gun-carriage, Mountain. See ORDNANCE, CARRIAGES FOR.

Gun-carriage, Prairie. See ORDNANCE, CARRIAGES FOR.

Gun-carriage, Sea-coast. See ORDNANCE, CARRIAGES FOR.

Gun-carriage, Siege. See ORDNANCE, CARRIAGES FOR.

Gun-cotton, or Pyroxyly. Gun-cotton was discovered by Schönbein in 1846, and was first made by treating ordinary cotton with a mixture of nitric and sulphuric acids. The product resembles ordinary cotton in appearance, but in color is slightly tinged with yellow, and is very much heavier. It explodes with great violence, but is unfit for most military purposes on account of its liability to spontaneous explosion, its corroding residue, and the irregular character of its explosion. Baron von Lenk, of the Austrian service, however, succeeded to some

extent in regulating the suddenness of the explosion by twisting it into ropes, and weaving it into cloth, but it never came much into favor for military purposes. As first made, the length of time necessary for its manufacture was about two or three months, but Mr. Abel, of the British war office, has by a series of experiments materially decreased the time necessary for its manufacture, and greatly increased the safety and certainty of the product. At Faversham the manufacture of a peculiar kind of gun-cotton, known as *tonite*, is conducted on a large scale. The process consists in intimately mixing the ordinary gun-cotton with about an equal weight of nitrate of baryta. This compound is then compressed into candle-shaped cartridges, formed with a recess at one end for the reception of a fulminate of mercury detonator. It contrasts favorably with soft, plastic dynamite from the fact of its being easily fastened to the safety-fuze. Among its advantages, said to be due to the use of the nitrate, are that it contains a great amount of oxygen in a very small volume, and that it is very ready under the detonator, while its great density makes it slow to the influence of ordinary combustion. It is 80 per cent. stronger than ordinary gun-cotton, and takes up but two-thirds of its space, or the same space as dynamite. The cartridges are generally made water-proof. The projectile force of gun-cotton, when used with moderate charges, is equal to about twice its weight of the best gunpowder. Its explosive force is in a high degree greater than that of gunpowder, and in this respect its nature assimilates much more to the fulminates than to gunpowder. It evolves little or no smoke, as the principal residue of its combustion is water and nitrous acid. Recently, by the mixture of nitre and cane-sugar its quickness in action has been reduced so as to make it available for use in small-arms. The nitrous acid, however, will soon corrode the barrel if the piece is not carefully wiped after firing. Other explosive substances analogous to gun-cotton may be prepared from many organic bodies of the cellulose kind, by immersing them in the same bath as for gun-cotton; among these may be mentioned paper, tow, sawdust, calico, and wood fibre.

Gundermuk. A village of Afghanistan, 28 miles west from Jellalabad. Here the remnant of the British force, consisting of 100 soldiers and 300 camp-followers, were massacred in 1842, while retreating from Cabul (Cabool), only one man escaping.

Gun-fire. The hour at which the morning or evening gun is fired.

Gun-lift. The gun-lift recently devised by Col. Laidley, of the U. S. Ordnance Corps, is a most complete and rapid means for moving and dismounting heavy guns. In it the hydraulic jack is placed upon a stand over the gun, whereby the building-up of the crib-work of blocks, which serves as a base for the jack to stand on, is dispensed with,

and the position of the jack has not to be changed during the operation of raising or lowering a gun. The ordinary carpenter's horse or trestle is taken as the basis of the *hoisting* apparatus. The cap of the trestle, having to sustain the weight of the gun suspended at a distance of more than 2 feet from the points of support, is a large, strong, and heavy piece of timber, and the legs of the trestle have to be strongly braced. The bolster, a strong piece of oak on top of the cap of the trestle, has two mortices cut in it, one for a hoisting-bar to *pass through*, and the other for the fulcrum-post to *rest in*. The fulcrum-post has a recess cut on the top to receive the end of a lever and keep it in place. The lever has a mortice through which the hoisting-bar, already mentioned, passes; the latter is perforated with a series of holes through which a pin passes, by which the end of the lever, under which the hydraulic jack works, can be fastened to the hoisting-bar. The hoisting-bar has a hook on its lower end to which the weight to be raised is fastened by means of a sling.

Gun-metal. An alloy of nine parts of copper and one part of tin, used for brass cannon, etc. (See BRONZE). The name is also given to certain strong mixtures of cast iron.

Gunner. A soldier employed to manage and discharge great guns; an artilleryman. In the U. S. service there is with each piece a gunner, who gives all the executive commands in action. He is answerable that the men at the piece perform their duties correctly.

Gunner's Calipers. Are made of sheet-brass, with steel points. The graduations show diameters of guns, shot, etc.

Gunner's Elevating Arc. See ELEVATING ARC.

Gunner's Level, or Gunner's Perpendicular. Is an instrument made of sheet-brass; the lower part is cut in the form of a crescent, the points of which are made of steel; a small spirit-level is fastened to one side of the plate, parallel to the line joining the points of the crescent, and a slider is fastened to the same side of the plate, perpendicular to the axis of the piece. This instrument is used to mark the points of sight on pieces. By means of the bubble the feet or points of the crescent are placed on a horizontal line on the base-ring or base-line, the slider pushed down until the point rests on the base-ring or line, and its position marked with chalk.

Gunner's Pincers. Are made of iron with steel jaws, which have on the end of one a claw for drawing nails, etc.

Gunner's Plummet. A simple line and bob for pointing mortars.

Gunner's Quadrant. Is a graduated quarter of a circle of sheet-brass of 6 inches radius, attached to a brass rule 22 inches long. It has an arm carrying a spirit-level at its middle and a vernier at its movable end. To get a required elevation, the vernier

is fixed at the indicated degree, the brass rule is then inserted in the bore parallel to the axis of the piece; the gun is then elevated or depressed until the level is horizontal. There is also a graduated quadrant of wood, of 6 inches radius, attached to a rule 28.5 inches long. It has a plumb-line and bob, which are carried, when not in use, in a hole in the end of the rule, covered by a brass plate.

Gunnery. The art of using fire-arms; but the term is commonly understood as being restricted to the use or application to the purposes of war of the larger pieces of ordnance, as cannon, mortars, and howitzers. In its practical branch gunnery includes a just knowledge of the construction of the several pieces of artillery, and of the strength, tenacity, and resisting power of the materials of which they are formed; of the method of mounting them upon strong, efficient, well-proportioned, and conveniently constructed carriages; of the proportions due to the strength of the powder and projectiles they should carry; of the force and effect, and also of the manufacture of gunpowder; and, generally, of all such mechanical arrangements and appliances as may facilitate the movements and working of the guns, etc., when prepared for action. But gunnery takes a yet far more extensive range; for it may be said to be based upon nearly every branch of the mathematical and physical sciences, and may be itself considered as a science requiring the most intricate combinations of human knowledge and mechanical ingenuity fully to comprehend and perfect. It particularly requires an acquaintance with all experiments which may have been made to ascertain the impetus of projection, the momentum of bodies in motion, and the range and time of flight of projectiles with given charges of gunpowder,—with the effect of the resistance of the atmosphere upon projectiles propelled with different velocities, and the laws of gravitation as affecting falling bodies; and with the various causes, mechanical and otherwise, of the usual deflection of projectiles in their course, when fired from a gun. See **PROJECTILES** and **VELOCITY**.

Gunning. The act of hunting or shooting game with a gun.

Gun-pendulum. A contrivance for obtaining initial velocities of projectiles. The gun is suspended from a frame-work with its axis horizontal. The velocity of the shot is deduced from the arc described in the recoil. The apparatus is now nearly obsolete.

Gun-platform. See **PLATFORM**.

Gunpowder. A well-known explosive mixture, whose principal employment is in the discharge, for war or sport, of projectiles from fire-arms, and for mining purposes. The ingredients in gunpowder are saltpetre, charcoal, and sulphur. Slightly different proportions are employed in different countries. In the United States the proportions are 75 to 76 saltpetre, 14 to 15 charcoal, and

10 sulphur. Charcoal is the combustible ingredient; saltpetre furnishes the oxygen necessary to support a rapid combustion and to change the whole mass into gas, and sulphur adds consistency to the mixture and intensity to the flame, besides rendering the powder less liable to absorb moisture; increases the volume of gas by preventing the formation of a solid potassium carbonate, and by increasing the temperature.

In the *manufacture* of ordinary powder, the operations usually employed are *pulverising* the ingredients, *incorporation*, *compression*, *granulation*, *glazing*, *drying*, and *dusting*.

The ingredients are *pulverised* by placing each separately in barrels which contain bronzes or zinc balls, and which are revolved rapidly for several hours.

Incorporation or thorough mixing is effected partially by the use of a rolling barrel, and completed in the *rolling-mill*. This consists of two cast-iron cylinders rolling round a horizontal axis in a circular trough with a cast-iron bottom. The cylinders are very heavy, and give a grinding motion, which is very effective in bringing about a thorough mixture of the three ingredients. A wooden scraper follows the rollers and keeps the composition in the middle of the trough. The charge in the trough is moistened with 2 or 3 per cent. of water before the rollers are started. A little water is added from time to time as required. This is the most important operation in the manufacture of powder. The time required is about one hour for each 50 pounds of composition. When finished the composition is called *mill-cake*.

Compressing.—This is next taken to the press-house, slightly moistened and arranged between brass plates, and then subjected to hydraulic pressure of about 70 tons (English tons) per square foot. Each layer is thus reduced to a hard cake.

Granulation.—The cake is broken up into grains by means of toothed rollers revolving in opposite directions, the cake being passed between them. The different-sized grains are separated by sieves between the different sets of rollers.

Glazing is effected by moistening the grains and revolving them in a rolling barrel.

Drying is done on sheets in a room heated to 140°–160°.

Dusting.—The dust is removed by revolving the powder in rolling barrels covered with coarse canvas. The dust is caught by an outside case.

There are five kinds of grain powder used in the U. S. service, distinguished as *mammoth*, *cannon*, *mortar*, *musket*, and *rifle* powder, all made in the same manner, of the same proportion of materials, and differing only in the size of the grain. Mammoth is employed for the heaviest sea-coast guns; cannon for smaller sea-coast guns; mortar for mortars and field- and siege-pieces; mus-

ket for rifle-muskets; and rifle for pistols. In addition to the above we have the following:

Meal powder, a fine dust containing the ingredients of ordinary gunpowder, but in which the relative proportions of these ingredients vary, according to the rate of burning desired, and the object for which the powder is to be used. Used principally in pyrotechny, and in mortar fire to communicate the flame from the charge to the shell. Also "*German*" or "*American*" "*White Gunpowder*," more powerful than ordinary gunpowder, but more expensive; acts upon iron, and is very little used in gunnery.

Pebble powder, an irregular large-grain powder, very similar to American "*Mammoth*," which preceded it, was made in England, 1865, by breaking ordinary *press-cake* with copper hammers.

Fossano powder, made in Italy, 1871, granulated by hand, is a slow-burning powder, used in large guns, notably in the 100-ton guns, one of which was recently burst, 1880, by a charge of 552 pounds of this powder. Lately the grains of this powder have been given a regular form.

Among *regular grain* powders made *without molding* are *cubical*, an English powder, extensively used in all their large guns, the largest being 2 inches on the edge. This is made by passing the cake between fluted rollers, which cut it into strips, and then these strips endways between a second set of rollers.

Shaghtcooke, made at Hart's Falls, N. Y., is a *cubical* powder made very much like the English,—the lines of fracture are, however, simply scratched on the cake (both sides), which is afterwards broken in the ordinary way.

Molded Powder.—The ingredients are the same as those of ordinary gunpowder, but each grain is separately molded.

Gen. Rodman was the first to propose the manufacture of these powders in his *perforated cake*, 1860; the object being to cause the powder to burn on an increasing surface, thus lessening the strain on the gun in the first moments of combustion. His powder after a few experiments was allowed to fall into disuse in the United States, but the invention was carried to Europe and developed with a smaller grain into *prismatic powder*, used in Europe, and especially in Germany and Russia, and particularly adapted to breech-loading cannon; the grain is a hexagonal prism in form and contains six cylindrical orifices passing entirely through it parallel to the axis, and symmetrically arranged with respect to it. The cartridge is so made that the cylindrical orifices pass through the entire length.

Hexagonal Powder.—This is the powder principally used in the United States; the grains have the shape which would be given by joining the larger bases of two frustrums of equal six-sided pyramids, and vary in size according to the piece in which the powder

is to be used. This powder is believed in the United States to give the best results, and can be adapted to cannon of any caliber.

History of Gunpowder.—The origin of gunpowder as an explosive, and its application to the projection of missiles of war, are lost in the mists of obscurity. Its use in Europe can be traced only to the middle or early part of the 14th century. It is believed by many that certain experiments by Schwartz, a German monk, led to its introduction in war, but the better theory seems to be that the knowledge was obtained from the Saracens. It is probable that the invention arose in Central Asia in the regions where saltpetre occurs as an effervescence of the soil. The Chinese appropriated the discovery at a very early period, and fireworks were common in that country when Europe was roamed by the primitive savage. When Ghengis Khan invaded China, B.C. 1219, fire-arms of a primitive form appear to have been used. Passages in old writers seem also to show that when Alexander invaded India, 327 B.C., he encountered tribes that used similar weapons. The people of India doubtless obtained their knowledge from China. Wars and migrations of tribes gradually disseminated a knowledge of gunpowder over Asia and Northern Africa. The use of gunpowder is mentioned in Arabic writings in the 13th century. The Moors used it in Spain in 1312. In 1381 the king of Granada employed it in sieges. It is said to have been used by the English in the battles of Crécy, 1316. The Venetians employed it in 1380 against the Genoese. From that time to the present fire-arms have gradually supplanted other weapons.

For a long time after its introduction gunpowder was used in the form of dust or "*meal powder*." Granulation was attempted to get rid of the difficulties in handling the dust, but the grained form proved too strong for the arms used, and "*meal powder*" continued in general use till improvements in the weapons about the close of the 16th century admitted of the other form. The granulation was at first very crude. This was remedied in time by the introduction of machinery or *corn-mills* in the manufacture. Though different-sized grains were at first used in large and small guns the principles involved were not studied, and afterwards one uniform size—large musket powder—was employed in all fire-arms. This step backwards may have been caused by the impurity of the ingredients and bad manufacture, which made the large grains too weak. In the early part of the present century a classification of grains was revived under the two general names of *musket* and *cannon powder*. The invention of the *mercury densimeter* rendered practicable an accurate determination of the specific gravity of powder and its relation to quickness of burning, but the importance of size and form of grain was first appreciated by Gen. Rodman, who, in 1859, began experiments which led at once

to the introduction of *mammoth powder* for large guns, and later to the invention of *perforated cake*. The introduction of the powerful ordnance now existing in Europe has been rendered possible by improvements in this direction based upon the principles first formulated by Rodman. The latest idea on the subject is "compensating powder" (proposed by Lieut. C. A. L. Totten, of the 4th U. S. Artillery), a spherical grain of gunpowder inclosing a smaller sphere of gun-cotton. This powder remains to be made and experimented with, but it opens a field of research which must lead to valuable results.

Gunpowder, Absolute Force of. See **ABSOLUTE FORCE OF GUNPOWDER.**

Gunpowder Pile-driver. A pile-driver operated by the explosive force of gunpowder. The hammer is arranged as usual to slide in vertical guides. It has a piston on its lower end, which enters a cylindrical hole in the pile-cap. In this hole the cartridge is placed, and is exploded through the compression of the air by the piston of the hammer, when the latter falls. The explosion drives down the pile and raises the hammer at the same blow. The powder ordinarily used is a mixture of chlorate of potash and bituminous coal.

Gunpowder Plot. A conspiracy entered into by a few Roman Catholics to destroy the king, lords, and commons on the meeting of Parliament on November 5, 1605. On the evening of the 4th, the famous Guy Fawkes, who was to be the leader and agent of the conspirators, was detected under the vaults of the House of Lords preparing the train for being fired the next day; and on the morning of the 5th, a little after midnight, he was arrested, examined, and tortured. He confessed his own guilt, but would not discover his associates. However, all of them were either killed on being captured, or died on the scaffold, except one. The memory of this plot has survived in England, and the name of Guy Fawkes is detected.

Gunpowder-mill. See **MILL, GUNPOWDER-**

Gunreach. The reach or distance to which a gun will shoot; gunshot.

Güns. A town of Hungary, situated on the river of the same name, about 57 miles south-southeast of Vienna. It is famous for its noble defense of its fortifications for twenty-eight days against the Turks under Solymán in 1582, thus enabling the emperor Charles V. time to assemble a force strong enough to oppose them.

Gunshot. The distance of the point-blank range of a cannon-shot. The distance to which shot can be thrown from a gun so as to be effective; the reach or range of a gun.

Gunshot. Made by the shot of a gun; as, a gunshot wound.

Gun-sling. See **SLING.**

Gunsmith. A maker of small-arms; one

whose occupation is to make or repair small fire-arms; an armorer.

Gunsmithery. The business of a gunsmith; the art of making small fire-arms.

Gunster. A gunner. This term is now rare.

Gunstick. A stick to ram down the charge of a musket, etc.; a rammer or ramrod. This term is now rare.

Gunstock. The stock or wood in which the barrel of a gun is fixed.

Gunstone. A stone used for the shot of cannon. Before the invention of iron balls, stones were used for shot, but are now altogether superseded.

Gunter's Chain (from Edmund Gunter, the inventor). The chain commonly used by military engineers for measuring land. It is 4 rods, or 66 feet long, and is divided into 100 links.

Gunter's Line. A logarithmic line on Gunter's scale, used for performing the multiplication and division of numbers mechanically by the dividers;—called also line of lines, and line of numbers; also a sliding scale corresponding to logarithms, for performing these operations by inspection, without dividers;—called also Gunter's sliding rule. This is used by military engineers.

Gunter's Scales. A wooden rule 2 feet long, on one side of which are marked scales of equal parts, of chords, sines, tangents, rhombs, etc., and on the other side, of logarithms of these various parts, by means of which many problems in surveying and navigation may be solved mechanically, by the aid of the dividers alone. This instrument is used by military engineers.

Gurges, or Gorges. A charge in heraldry meant to represent a whirlpool. It takes up the whole field, and when borne proper is azure and argent.

Gurries. Mud forts made in India are so called. These forts are sometimes surrounded with ditches.

Gurwal. A state of Northern Hindostan, under the protection of the British government, at the foot of the Himalaya Mountains. Gurwal was subdued by the Nepaulese about the year 1808, when Purdumin Shah, the rajah, at the head of 12,000 men, was defeated and slain at Gurudwara. The country was conquered by the British in 1814, and partly restored to the rajah's son.

Gusset. Was at first a piece of chain, and afterwards of plate-armor, intended as a protection to the vulnerable point where the defenses of the arm and breast left a gap. In heraldry it is one of the abatements, or marks of disgrace for unknighly conduct. It is represented by a straight line extending diagonally from the dexter or sinister chief point one-third across the shield, and then descending perpendicularly to the base.

Guy. A rope used to swing any weight, or to keep steady any heavy body, and prevent it from swinging, while being hoisted or lowered.

Guzerat. A state in India, founded by Mahmoud the Gaznevide, about 1020; was conquered by Akbar in 1572; and became subject to the Mahrattas, 1732 or 1752. At the battle of Guzerat, February 21, 1849, Lord Gough totally defeated the Sikhs, and captured the city of Guzerat.

Gwalior. Capital of the state of the same name, in Central India. Its nucleus is a completely isolated rock of about 800 feet in height, perpendicular, either naturally or artificially, on all sides; and as it measures $1\frac{1}{2}$ miles by 800 yards, it can accommodate a garrison of 15,000 men. It is thus virtually impregnable against any native force. The spot is understood to have been occupied as a stronghold for more than a thousand years.

Gyongyos. A town of Hungary, 48 miles

northeast from Pesth. The Austrians were defeated here by the Hungarians in 1849.

Gytheum, or Gythium (now *Palæopolis*, near *Marathonisi*). An ancient town on the east coast of Laconia, founded by the Achæans, near the head of the Laconian Bay, southwest of the mouth of the river Eurotas. It served as the harbor of Sparta, and was important in a military point of view. In the Persian war, the Lacedæmonian fleet was stationed at Gytheum, and here the Athenians under Tolmides burned the Lacedæmonian arsenal, 455 B.C. After the battle of Leuctra (370) it was taken by Epaminondas. In 195 it was taken by Flaminius, and made independent of Nabis, tyrant of Sparta, whereupon it joined the Achæan league.

Gyves. Fetters; old word for handcuffs.

H.

Haarlem, or Haerlem. A city of the Netherlands, in the province of Northern Holland, on the Spaarne. It is an ancient town, and was once the residence of the counts of Holland; was taken by the Duke of Alva in July, 1573, after a siege of seven months. He violated the capitulation by butchering half the inhabitants.

Habeas Corpus. A writ of habeas corpus is an order in writing, signed by the judge who grants the same, sealed with the seal of the court of which he is a judge, and issued in the name of a sovereign power where it is granted, by such a court or a judge thereof having lawful authority to issue the same, directed to any one having a person in his custody or under his restraint, commanding him to produce such person at a certain time and place, and to state the reason why he is held in custody or under restraint.

Habergeon. A short coat of mail, consisting of a jacket without sleeves. In early times the habergeon was composed of chain-mail; but in the 14th century a habergeon of plate-armor was worn over the hauberk.

Habiliments of War. In ancient statutes signify armor, harness, utensils, etc., without which it is supposed there can be no ability to maintain a war.

Habsburg, or Hapsburg, House of. An ancient sovereign family of Austria, which derives its name from the castle of Habesburg, in Switzerland. The first member of the family who acquired great celebrity was Rudolph of Habesburg, born in 1218, and elected emperor in 1273. He obtained Austria and other provinces by conquest, and founded the dynasty which now reigns over the Austrian empire, and which, since 1786,

has been styled the house of Habsburg-Lorraine.

Hachée (*Fr.*). Ignominious punishment of carrying a saddle or dog, to which soldiers were formerly subject in France.

Haches d'Armes (*Fr.*). Pole- or battle-axes. A *hache d'arme* is an axe with a narrow handle armed with a sharp blade in the form of a crescent very much curved, terminating in two points approaching the handle on one side; the other side terminating in a point or hammer; when both sides were armed with a blade it was called *besague*.

Hack. To cut irregularly, without skill or definite purpose; to notch; to mangle by repeated strokes of a cutting instrument. "My sword hacked like a handsaw."

Hack-bush. Formerly a heavy hand-gun.

Hacquet Wagen. A four-wheeled wagon used in the Prussian service to carry pontons. The under-frame of this carriage is built like that of a chariot, by which means it can turn without difficulty.

Hacqueton. A stuffed coat or cloak, generally of leather, mounted with metal, formerly worn in France by certain knights of the king's guards called "*Gardes de la Manche*." It came into use during the reign of Charles V., and was discarded during the revolution of 1789.

Haddington. A royal burgh of Scotland, and county town of Haddingtonshire, or East Lothian. It was burnt in 1216 by an invading army under John, king of England. Having been rebuilt, it was again burnt to the ground in 1244. In 1855 it was reduced to ashes for the third time by Edward III. of England. The year after the battle of Pinkie, 1548, Haddington was seized and

strongly fortified by the English. An allied army of Scotch and French laid siege to it, and, after a memorable defense, it was evacuated by the English in October, 1649.

Hadrumetum. See **ADRUMETUM**.

Hagbut, or Haguebut (Fr. *haquebuts*). An arquebuse, of which the butt was bent or hooked, in order that it might be held more readily.

Hagbutar. The bearer of a fire-arm formerly used.

Hagg. An arquebuse with a bent butt.

Hague. A little hand-gun of former times.

Haguebut, or Hague-but. The same as hagbut (which see).

Haguenau. A town of France, in the department of Bas-Rhin, formerly a free town of Germany and a strong fortress, situated on the Moder, 18 miles north-northeast of Strasburg. It was founded in 1164 by Frederick Barbarossa. It successfully withstood many sieges, especially during the Thirty Years' War; but on its occupation in 1675 by the Imperialists, its fortifications were destroyed. On October 17 and December 22, 1793, bloody battles took place here between the French and Austrians, in which the former were the victors.

Haik. A large piece of woolen or cotton cloth worn by the Arabs over the tunic, being itself covered in foul weather by the bur-noose. This word is also written *hyke*.

Hail. To accost; to call; to salute. A sentinel hails any one approaching his post with, "Who comes there?"

Hail-shot. Grape-shot.

Hainburg. A town of Austria, on the Danube, 28 miles southeast from Vienna. The Magyars, or Hungarians, gained a great victory here over the Germans in 907.

Hair. A spring or other contrivance in a rifle or pistol lock, which, being unlocked by a slight pressure on the trigger, strikes the tumbler-catch, and unlocks the tumbler.

Hair-cloth. A species of cloth made of horse-hair, laid upon the floors of magazines and laboratories to prevent accidents. It is usually made up in pieces 14 feet long and 11 feet wide, each weighing 36 pounds.

Hair-line. A line made of hair; a very fine line. This line is used in military engineering.

Hair-trigger. A trigger so constructed as to discharge a fire-arm by a very slight pressure, as by the touch of a hair. It is connected with the tumbler-catch by a device called a *hair*.

Hajduk, Haiduk, or Hayduk. The Magyar inhabitants of the district of Hajdu Kerulet, in Eastern Hungary. The Hajduk are direct descendants of those warriors, who, during the long and bloody contest between the house of Hapsburg and the Protestant insurgents of Hungary, formed the nucleus of Prince Stephen Bocskay's valiant armies. They formerly enjoyed the privileges of the nobility, and were free from taxation.

Hake. An old term for a hand-gun.

Halberd, or Halbert. A weapon borne up to the close of the 18th century by all sergeants of foot, artillery, and marines, and by companies of halberdiers in the various regiments of the English army. It consisted of a strong wooden shaft about 6 feet in length, surmounted by an instrument much resembling a bill-hook, constructed alike for cutting and thrusting, with a cross-piece of steel, less sharp, for the purpose of pushing; one end of this cross-piece was turned down as a hook for use in tearing down works against which an attack was made.

Old Halberd is a familiar term formerly used in the British army, to signify a person who had gone through the different gradations, and risen to the rank of a commissioned officer.

Halberdier. One who is armed with a halberd.

Hale's Rocket. See **ROCKET**.

Half Bastion. A demi-bastion. That half of a bastion cut off by the capital, consisting of one base and one front.

Half Caponniere. A communication in a dry ditch with one side prepared for defense.

Half Merlens. The merlens at the ends of a parapet.

Half-batta. An extra allowance which was granted to the whole of the officers belonging to the British East Indian army, except Bengal, when out of the company's district in the province of Oude. In the upper provinces double batta was allowed. All above full was paid by the native princes, as the troops stationed in that quarter were considered as auxiliaries. Batta is equal to full pay. See **BATTA**.

Half-brigade. A demi-brigade.

Half-cock. The position of the cock of a gun when retained by the first notch. Also, to set the cock at the first notch.

Half-companies. The same as subdivisions, and equal to a platoon.

Half-distance. Is half the regular interval or space between troops drawn up in ranks or standing column.

Half-face. Is to take half the usual distance between the right or left face, in order to give an oblique direction to the line, or to fill up a gap at the corner of a square.

Half-file Leader (Fr. *chef de demi-file*). The foremost man of a rank entire.

Half-files. Is half the given number of any body of men drawn up two deep. They are so called in cavalry when the men rank off singly.

Half-full Sap. When the sappers have only a flank fire (coming in a direction nearly perpendicular to that of the sap) to fear, the sap-roller may be dispensed with. The first sapper then covers himself with the last-filled gabion whilst placing and filling the new one. This species of sap is called the half-full sap.

Half-hitch. Pass the end of a rope round its standing part, and bring it up through the bight.

Half-moon (Fr. *demi-lune*). In fortification, is an outwork that has two faces which form a salient angle, the gorge of which resembles a crescent. It owes its original invention to the Dutch, who used it to cover the points of their bastions. This kind of fortification is, however, defective, because it is weak on its flanks. Half-moons are now called ravelins, which species of work is constructed in front of the curtain.

Half-pay. An allowance given in the British army and navy to commissioned officers not actively employed. It was first granted by William III. in 1698. In the U. S. service officers receive half-pay only when on leave of absence for a longer period than that for which full pay on leave is allowed, namely, thirty days in each year. See **ABSENCE**, **LEAVE OF**.

Half-pike. A short pike, which was formerly carried by officers.

Half-sunken Battery. See **BATTERY**.

Half-sword. A fight within half the length of a sword; a close fight.

Halimartus (now *Mazi*). An ancient town in Boeotia, on the south of the Lake Copais. It was destroyed by Xerxes in his invasion of Greece, 480 B.C., but was rebuilt, and appears as an important place in the Peloponnesian war. Under its walls Lysander lost his life, 395; it was destroyed by the Romans (171) because it supported Perseus, king of Macedonia, and its territory was given to the Athenians.

Halicarnassus (now *Boudroum*). A Greek city of Asia Minor, situated on the Ceramian Gulf. It was founded by a colony from Trozene, and was one of the cities of the so-called Doric Hexapolis. During the Persian conquests it readily yielded to the dominion of the conquerors, and remained faithful to Persian interests. Alexander the Great, provoked by the obstinacy with which the city held out against him, commanded that it should be destroyed by fire; but the inhabitants took refuge in the citadel, which successfully resisted his arms.

Halidon Hill. Is situated about a mile to the northwest of the town of Berwick, England, in the fork formed by the Whitadder and the Tweed. It was the scene of a bloody conflict between the English and Scots, July 19, 1833, when the latter were defeated, and lost upwards of 14,000 slain, among whom were the regent Douglas and a large number of the nobility, while a comparatively small number of the English suffered.

Hallecret. See **ALLECRETE**.

Halluc. A small river in Northern France, which empties into the Somme above Amiens. Near here, at Pont à Noyelles, a seven hours' battle took place December 23, 1870, between the German army under Gen. Manteuffel and the French Army of the North under Gen. Faidherbe. Both parties claimed the victory. Next day the French general retreated.

Halt (Fr. *halte*). The discontinuance of

the march of any body of men, armed or unarmed, under military direction. Frequent halts are necessary for the purpose of resting troops during their progress through a country, or to render them fresh and active previous to any warlike undertaking. It is likewise a word of command in familiar use. See **MARCH**.

Halting Days. Are the days in the week usually allotted for repose, when troops are upon the march, and there is not any particular necessity for exertion or dispatch.

Halyard. The rope for hoisting and lowering a flag. Written also *haliard*.

Halys. A river in Asia Minor, near which a battle was fought between the Lydians and Medes. It was interrupted by an almost total eclipse of the sun, which led to peace May 28, 585 B.C. Others give the date 584, 603, and 610 B.C. This eclipse is said to have been predicted many years before by Thales of Miletus.

Ham. A town and fortress of France, in the department of Somme, situated on the river of that name, 86 miles east-southeast from Amiens. It is of ancient origin, and was erected in 1407 into a duchy, which was held by the families of Courcy, Orleans, Luxemburg, and Vendôme. Its old fortress was built by Constable de St. Pol in 1470, and is now used as a state prison. Its walls are 39 feet thick, and its principal tower is 108 feet in height, and the same in diameter. Louis Napoleon, late emperor of the French, was confined here from 1840 till 1846.

Hamburg. A famous free city of Germany, and one of the most important commercial ports in Europe, is situated on the right bank of the Elbe, about 70 miles from its mouth. It is said to have been founded in the 8th century by Charlemagne. In the 18th century it joined Lubeck in the formation of the Hanseatic League. It was occupied by the French from 1806 to 1809, and was annexed to France in 1810. The Russians became masters of it in 1813, but the French regained possession of it in the same year, and Marshal Davoust sustained a memorable siege here in 1813-14. In 1871 Hamburg became a member of the German empire.

Hames. The wooden or iron curved pieces fitting the collar of draught harness to which the traces are attached.

Hamlets, Tower. A district in the county of Middlesex, England, under the command of the constable of the Tower, or lieutenant of the Tower Hamlets, for the service and preservation of the Tower of London.

Hammer. An instrument with an iron head, for driving nails, etc. The term is also applicable to that part of a gun-lock which strikes the percussion-cap or firing-pin.

Hammering. A heavy cannonade at close quarters.

Hammer-spring. The spring on which the hammer of a gun-lock works.

Hammer-wrench. A combination hammer and wrench; called also *monkey-wrench*.

Hampton. A small village on the Chesapeake Bay, in Virginia, giving its name to Hampton Roads, a southerly branch of Chesapeake Bay, and mouth of James River, defended by Forts Monroe and Calhoun. These roads were the scene of important events in the American Revolution, the war of 1812, and the late civil war, especially the first naval battle between ironclad vessels, the "Merrimac" and the "Monitor."

Hanapier, or Hanepier (Fr.). The front part of a cuirass, or iron breastplate worn by light-armed soldiers.

Hanau. A town of Germany, the capital of a province of the same name, in Hesse-Cassel, on the Kinzig, 12 miles from Frankfurt-on-the-Main. In 1792, Hanau was attacked by the French, and occupied by them in 1796, 1797, and 1805.

Hand. A measure 4 inches in length. The height of a horse is computed by so many hands and inches.

Hand-barrow. A frame which is carried around by two men, instead of being rolled forward like a wheel-barrow. Those employed in the ordnance department are very useful in the erection of fortifications, as well as carrying shells and shot along the trenches. They generally weigh about 19 pounds.

Hand-cart. It consists of a light body with shafts, mounted on two wheels. The shafts are joined together at the ends, and supported immediately in front of the body by iron legs. It weighs 181 pounds, and is used for the transportation of light stores in siege and garrison service.

Handcuff. A fastening consisting of an iron ring around the wrist, usually connected by a chain with one on the other wrist; a manacle. Men who have deserted the service are usually manacled in this manner when removed from place to place.

Handful. Used figuratively, in a military sense, to denote a comparatively small number; as, "a handful of men."

Hand-gallop. A slow and easy gallop, in which the hand presses the bridle to hinder increase of speed.

Hand-grenades. Are small iron shells, from 2 to 8 inches in diameter, filled with powder, which being lighted by means of a fuze, were formerly thrown by the grenadiers among the enemy, in storming a fortress. See GRENADES.

Hand-gun. An old term for a small-arm in the times of Henry VII. and VIII.

Handle Arms. Formerly a word of command (when the men were at *ordered arms*), by which the soldier was directed to bring his right hand briskly up to the muzzle of his firelock, with his finger bent upwards.

Handles. Bronze guns were formerly furnished with handles placed over the centre of gravity; from their shape they were called *dolphins*.

Hand-mallet. A wooden hammer with a handle, to drive fuzes, or pickets, etc., in making fascines or gabion batteries.

Hand Sling-cart. Is a two-wheeled car-

riage made entirely of iron, except the pole, which is of oak. The axle-tree is arched to make it stronger, and connected with the pole by strong wrought-iron straps and braces. In the rear of the axle a projection is welded, to receive the end of a strong hook. The end of the pole terminates in a ferule and an eye. The eye is for the purpose of attaching to the cart, when necessary, a limber or a horse. The diameter of the wheel is 6 feet. The *hand sling-cart* is used in siege and garrison service for transporting artillery short distances. It should not be used *habitually* for heavier weights than about 4000 pounds, but in case of necessity, a 24- or 32-pounder gun may be transported on it. For heavier guns or material, the large *sling-cart* drawn by horses or oxen should be used. This cart is wooden throughout, and the diameter of the wheels 8 feet.

Hand-spike. Is a wooden or iron lever, flattened at one end and tapering towards the other, used in raising heavy weights, or in moving guns to their places after being reloaded.

Manœuvring hand-spike, for garrison and sea-coast carriages and for gins, is 66 inches; for siege and other heavy work, it is made 84 inches long and 12 pounds weight.

Roller hand-spike, for casemate carriages. The latter is made of iron 1 inch round, the point conical; whole length 34 inches.

Shod hand-spike is particularly useful in the service of mortars, and of casemate and barbette carriages.

Trail hand-spike, for field-carriages, is 53 inches in length.

Truck hand-spike, for casemate carriages (wrought iron).

Hand-staff. A javelin.

Hand-to-hand. A close fight; the situation of two persons closely opposed to each other.

Handy-fight. A fight with the hands; boxing.

Hang Fire. Fire-arms and trains are said to hang fire when there is an unwonted pause between the application of fire to the gunpowder and its ignition.

Hang Upon, To. To hover; to impend. Thus, to *hang upon* the flanks of a retreating enemy, is to follow the movements of any body of men so closely as to be a perpetual annoyance to them; to harass and perplex him in a more desultory manner than what is generally practiced when pressing upon his rear.

Hanged, Drawn and Quartered. In Great Britain, the description of the capital sentence on a traitor, which consisted of drawing him on a hurdle to the place of execution, and after hanging him, dividing the body into quarters. This punishment was substituted by the stat. 54 Geo. III. c. 146, for the ancient and more barbarous sentence of disemboweling alive; but the crown has power to reduce the sentence to simple hanging.

Hanger. That which hangs or is sus-

pended; specifically, a short broadsword, incurvated towards the point.

Hangier. A Turkish poniard, formerly worn by the Janissaries.

Hango Head. A promontory on the north coast of the Gulf of Finland. It was at this place, during the war with Russia, in 1855, that the unarmed crew of an English man-of-war's boat, with a flag of truce flying, was treacherously fired upon by Russian grenadiers, when all the British sailors in the boat were either killed or wounded.

Hanover. A kingdom in the north of Germany, and since 1866 a province of Prussia. It was originally peopled by the Cherusci, the Chauici, and the Langobardi, afterwards known as Lombards. In the time of Charlemagne it was occupied by Saxon tribes, and continued, even after its conquest by that monarch, to be governed by Saxon dukes. From 1714 till 1837, Hanover was governed by the kings of England, without, however, forming part of that kingdom. The French occupied it in 1803; but, two years afterwards, ceded it to Prussia. In 1807, however, they took possession of it, and held it till 1813.

Hanover Court-house. A town in East Virginia. Here on May 27, 1862, a severe action took place between the armies of the North and South, which resulted in a victory for the former. The loss on the Northern side was 54 killed and 194 wounded and missing; and on the Southern side, between 200 and 300 killed and wounded, and about 500 taken prisoners.

Hanse Towns. The Hanseatic League (from *hansa*, association), formed by port towns in Germany against the piracies of the Swedes and Danes, began about 1140, and was signed in 1241. At first it consisted only of towns situated on the coasts of the Baltic Sea, but in 1370 it was composed of 66 cities and 44 confederates. They proclaimed war against Waldemar, king of Denmark, about the year 1348, and against Eric in 1428, with 40 ships and 12,000 regular troops, besides seamen. The Thirty Years' War in Germany (1618-48) broke up the strength of this association. In 1630 the only towns retaining the name were Lubeck, Hamburg, and Bremen.

Hansy. A town of Hindostan, in the British district of Hurreesana, under the jurisdiction of the lieutenant-governor of the northwest provinces. It is a very ancient town; was taken by the Mohammedans early in 1085, and has experienced many revolutions.

Hante (Fr.). An ornamental pike, having a banner attached.

Haquebut. See HAGBUT.

Har. A syllable used in composition usually as a prefix, and signifying *army*;—occurring in various forms, as *hare*, *her*, and *here*; as, *harrisvalt*, leader of an army.

Haranes (Fr.). Hungarian militia are so called.

Harangue. A speech addressed to a large

public assembly; a popular oration; a loud address to a multitude; as, a general makes a harangue to his troops on the eve of a battle.

Harass. To annoy; to perplex, and incessantly turmoil any body of men; to hang upon the rear and flanks of a retreating army, or to interrupt operations at a siege by repeated attacks upon the besiegers.

Harboring an Enemy. See APPENDIX, ARTICLES OF WAR, 45.

Harcarrah. In India, a messenger employed to carry letters, and otherwise intrusted with matters of consequence that require secrecy and punctuality. They are very often Brahmins, well acquainted with the neighboring countries; they are sent to gain intelligence, and are used as guides in the field.

Hard-fought. Vigorously contested; as, a hard-fought battle.

Hardihood. Boldness, united with firmness and constancy of mind; dauntless bravery; intrepidity; audaciousness.

Hardiment. Hardihood; courage; bold or energetic action; contest; struggle.

Hard-labor. A military punishment frequently awarded by courts-martial.

Hard-tack. Sea-bread. Hard-tack is also used by U. S. troops while campaigning; large crackers.

Harfleur. A town of France, in the department of the Lower Seine, situated at the confluence of the Seine and the Lezarde, a mile from the sea, and 8 miles northeast from Havre. Harfleur was formerly fortified, and an important place. It was besieged by the English under Henry V. in 1415, and this monarch succeeded in taking it, after being before it forty days. It was again taken by the English in 1440.

Harlaw. A township of Scotland, in Aberdeenshire, situated 4 miles southwest from old Meldrum, near the confluence of the Ury and Don, memorable for a sanguinary battle fought in 1411 between the Highlanders under Donald, the Lord of the Isles, and the royal forces under the Earl of Mar.

Harmostes. A city governor or prefect appointed by the Spartans in the cities subjugated by them.

Harness. The iron covering or dress which a soldier formerly wore, and which was fastened to the body by straps and buckles; coat of mail; also, the whole accoutrements, offensive and defensive; armor of a knight or soldier; the armor of a horse. Also the equipments of a draught-horse.

Harness. To dress in armor; to equip with armor for war, as a horseman. To equip or furnish for defense.

Harol. An Indian term signifying the officer who commands the van of an army. It sometimes means the van-guard itself.

Harpe. A species of drawbridge used among the ancients, and deriving its name from its resemblance to the musical instrument. This bridge, which consisted of a

wooden frame, and hung in a perpendicular direction against the turrets that were used in those times to carry on the siege of a place, had a variety of ropes attached to it, and was let down upon the wall of a town by means of pulleys. The instant it fell, the soldiers left the turret, and rushed across the temporary platform upon the rampart.

Harper's Ferry. A town of Jefferson Co., W. Va., situated at the junction of the Shenandoah and Potomac Rivers, about 107 miles north from Richmond. In October, 1869, John Brown, the leader of the anti-slavery party, and his followers entered the town, and seized and held for a short time the armory and arsenal located here. In April, 1861, the Federal troops evacuated the public buildings here, and they were immediately taken possession of by the Confederates, who destroyed them and evacuated the place in June, following. The town was again taken by the Confederates in September, 1862, but was soon after recaptured by the Federal forces, who from that time retained possession of it.

Harponully. A district in the south of India. The rajah of this district was tributary to the kings of Benjanagur and Bejapore, to the Moguls, and the Mahrattas; in 1774 he became tributary to Hyder, and in 1786 he was completely subdued by Tippoo, and sent prisoner to Seringapatam. On the capture of that city, Harponully was assigned to the nizam as a portion of his division of Tippoo's territory, and by him assigned to the British in 1800.

Harpy. A fabulous creature in Greek mythology, considered as a minister of the vengeance of the gods. In heraldry it is represented as a vulture, with the head and breast of a woman.

Harquebuse. See **ARQUEBUSE.**

Harquebusier. See **ARQUEBUSIER.**

Hartlepool. A seaport of England, in the county Durham, a few miles north of the mouth of the river Tees. It is mentioned as a harbor of some consequence as early as 1171. In the 18th century it belonged to the Bruces of Annandale, in Scotland. Hartlepool suffered severely from the Scots in 1812, and again in 1815, a year after the battle of Bannockburn. It was seized by the insurgents in the northern rebellion under the Earls of Northumberland and Westmoreland, in the time of Elizabeth. During the civil war it was taken by the Scottish army in 1644, and retained by them till 1647.

Hastaire (Fr.). Pikeman; spearman.

Hastati. From the Latin word *hasta*, a spear, so that they may literally be called spearmen. A body of Roman soldiers who were more advanced in age, and had acquired a greater reputation in arms than the *velites* possessed, were distinguished by this appellation. They wore a complete set of armor, and always carried a buckler, made convex, measuring 2½ feet in breadth and 4 feet in length. The longest measured about

4 feet 9 inches, or a Roman palm. The buckler was made of two boards glued together. These were covered in the first instance with a broad piece of linen, which was again covered over with sheep-skin. The edges, both at top and bottom, were fenced with iron, to enable them to meet the broadsword and sabre, and to prevent them from rotting when planted on the ground. The convex part was further covered over with iron plates, to resist the impression of hard blows, and to withstand the violent concussion of stones, etc. The *hastati* commonly formed the first line in the order of battle; the *principes* were placed in the second line; whilst the oldest and best legionaries, classed under the name of *triarii*, constituted a reserve or third line.

Hastings. A town of England, in the county of Surrey, 83 miles northeast from Brighton, and one of the Cinque Ports. Near this place, in 1066, was fought the decisive battle of Hastings, which wrested the crown of England from Harold, and gave it to William the Conqueror.

Hatchet. A small, light sort of axe, with a basil edge on the left side, and a short handle. It is used by soldiers for cutting wood to make fascines, gabions, pickets, etc. *To take up the hatchet*, among the Indians, to declare war, to commence hostilities, etc. *To bury the hatchet*, to make peace.

Hatchment. An ornament on the hilt of a sword. In heraldry, a hatchment is the funeral escutcheon, usually placed in front of the house of a deceased person, setting forth his rank and circumstances. It is in the form of a lozenge, and in its centre are depicted the arms of the deceased, single or quartered.

Hatras. A town of Hindostan, in the northwest provinces, 83 miles to the north of Agra. As a place of some strength, it was at one time prominent in the wars of the Doab; but on falling, in 1817, into the possession of the British, it was immediately dismantled.

Hatras. A fortress of India, taken by siege and storm by the troops under the Marquis of Hastings during the Mahratta war.

Haubergier (Fr.). An individual who held a tenure by knight's service, and was subject to the feudal system which formerly existed in France, and by which he was obliged to accompany the lord of the manor in that capacity whenever the latter went to war. He was called *fief de haubert*, and had the privilege of carrying a haubert. All vassals in ancient times served their lords-paramount as squires, haubergiers, lance-men, bow-men, etc.

Hauberk. A twisted coat of mail, sometimes extending only as high as the neck, but more generally continued so as to form a coif, leaving only the face of the knight who bore it exposed. In early times the sleeve of the hauberk sometimes terminated at the elbow, but in the 13th and 14th cen-

turies it came down to the wrist, and very generally descended over the hand in the form of a glove, either one-fingered or divided. In the 11th century the hauberk was worn under plate-armor.

Haul. To pull or draw with force or violence; to transport by drawing; to drag; to compel to move or go.

Hausse, Pendulum. Is a scale of sheet-brass, the graduations of which are the sines of each quarter of a degree to a radius equal to the distance between the muzzle-sight of the piece, and the axis of vibration of the hausse, which is one inch in rear of the base-ring. At the lower end of the scale is a brass bulb filled with lead. The *slider* which marks the divisions on the scale is of thin brass, and is clamped at any desired division on the scale by means of a screw. The scale passes through a slit in a piece of steel, with which it is connected by a screw, forming a pivot on which the scale can vibrate laterally. This piece of steel terminates in pivots, by means of which the pendulum is supported on the *seat* attached to the gun, and is at liberty to vibrate in the direction of the axis of the piece. The *seat* is of metal, and is fastened to the base of the breech by screws, so that the centres of the steel pivots of vibration shall be at a distance from the axis of the piece equal to the radius of the base-ring.

Hausse-col (Fr.). An ornamental plate similar to the gorget. It was formerly worn by infantry officers.

Hautes-payes (Fr.). Were soldiers selected by the captains of companies to attend them personally, for which service they received something more than the common pay. Haute-paye became afterwards a term to signify the subsistence which any body of men superior to, or distinguished from the private soldier were allowed to receive.

Haut-le-pied (Fr.). A term used to distinguish such persons as were formerly employed in the French armies without having any permanent appointment. *Commissaires hauts-le-pied* were known in the artillery during the monarchy of France. They were usually under the quartermaster-general.

Havana (Sp. Habana). The capital of the island of Cuba, on its north coast, at the mouth of the river Lagida. The harbor is one of the best in the world, being capable of holding 1000 ships with ease; but it has so narrow a channel that only one vessel can enter at a time. This channel is strongly fortified; the city is also surrounded with defensive works, all furnished with heavy artillery. Havana has been frequently attacked; it was captured in 1536 by a French pirate, and partially destroyed; it was subsequently taken, at different times, by the English, by the French, and by the buccaneers. In 1762 the British took possession of it, but restored it in 1763.

Havelock. A light cloth covering for the head and neck, used by soldiers as a pro-

tection from sunstroke. This covering derived its name from Havelock, a distinguished English general.

Haverfordwest (Welsh, *Hwlford*). A seaport of Wales, in Pembrokeshire, and the capital of that county. It was at one time strongly fortified, and was possessed of a strong castle, which was built by Gilbert de Clare, first earl of Pembroke. In the insurrection of Owen Glendower, it was successfully defended against the French troops in the Welsh service. In the civil war of the 17th century it was held by the royalists.

Haversack. A strong, coarse, linen bag, in which, on a march, a soldier carries his rations. It is borne on the left side, suspended by a strap passing over the right shoulder. The name is also given to the leather bag used in artillery to carry cartridges from the ammunition-chest to the piece in loading.

Havildar. A non-commissioned officer or sergeant among the Sepoys. He ranks next to the jemadar, or native lieutenant.

Havildar-major. The native sergeant-major in a native infantry regiment.

Havoc. Wide and general destruction; devastation; waste. Also, to waste; to destroy; to lay waste.

Havock. A cry originally used in hunting, but afterward in war as the signal for indiscriminate slaughter.

Havre Le, or Havre de Grace. An important and strongly fortified commercial town of France, in the department of the Lower Seine, at the entrance of the Seine into the English Channel. Havre was taken by the British in 1662, and bombarded by them in 1759, 1794, and 1795.

Hawaii. See OWYHEE.

Hazo-casemate. A vault of masonry thrown over a gun, but not over its embrasure. It is open at the rear, and acts as a traverse.

Hayti, Haiti, St. Domingo, or Hispaniola. The largest island in the West Indies, with the exception of Cuba. It was discovered by Christopher Columbus in 1496. Until 1665 Spain kept possession of the island; but in that year the French obtained a footing, and retained their position for upwards of a century and a quarter. In 1800 the independence of Hayti was proclaimed by the negro population, and the French finally quitted the island in 1803. Since that time various revolutions have occurred, and a kind of military elective government has prevailed under different leaders. In 1849 the former French portion of the island was proclaimed an empire under its president, Solouque, who took the title of Faustin I. The sable emperor was, however, deposed in 1858, and a republic was again proclaimed.

Hazaree. An Indian term signifying the commander of gun-men. It is derived from *hazar*, which, in its literal interpretation, signifies a thousand.

Haze, To. To punish a man by making him do unnecessary work.

Head. In gunnery, the fore part of the cheeks of a gun or howitzer carriage. *To head*, is to lead on, or be the leader of a party. *Head of a work*, in fortification, is the front next to the enemy, and farthest from the place; as the front of a horn-work is the distance between the flanked angles of the demi-bastions. The head of a double tenaille is the salient angle in the centre and the two other sides which form the re-entering angles. *Head of an army*, or body of men, is the front, whether drawn up in lines or on a march, in column, etc. *Head of a camp*, is the ground before which an army is drawn up.

Head, Bridge. Is the end of a bridge,—also the work defending it.

Header. In a revetment, is a brick, stone, or sod laid with its end outwards.

Headless. Destitute of a chief or leader.

Head-man. A chief; a leader.

Head-piece. Armor for the head; a helmet; a morion.

Headquarters. The place where the officer commanding any army or independent body of troops takes up his residence. The quarters or place of residence of the chief officer; hence, the centre of authority or order.

Headstall. That part of a bridle which encompasses the head.

Heaume (Fr.). A word derived from the German, which formerly signified *casque*, or helmet. The heaume has been sometimes called among the French *salade*, *armet*, and *celate* from the Latin word which means engraved, on account of the different figures which were represented upon it. The heaume covered the whole of the face, except the eyes, which were protected by small iron bars laid crosswise. It serves as an ornament or helmet in coats of arms and armorial bearings; it is still preserved in heraldry, and is a distinguishing mark of nobility.

Heaver. A bar used as a lever.

Heavy. Strong; violent; forcible; as, a heavy cannonade.

Heavy Artillery. Troops who serve heavy guns. The term is specially applied to troops in charge of siege guns or guns of position. Also large guns themselves.

Heavy Cavalry. European cavalry is divided into light and heavy cavalry, according to the size of the men and horses and the character of the equipment.

Heavy Fire. A continuous cannonading; a continuous discharge of musketry.

Heavy Marching Order. An expression applied to troops equipped for permanent field service with arms, accoutrements, knapsacks, canteens, and haversacks.

Heavy Metal. Large guns carrying balls of a large size; also, large balls for such guns.

Heavy Ordnance. Ordnance of great weight and caliber. In the United States the term is restricted in the land service to sea-coast ordnance. See **ORDNANCE**.

Hebrides, or Western Islands. A series of islands off the west coast of Scotland, consisting of two principal groups. In ancient times they were subject to the kings of Norway, but were annexed to the crown of Scotland in 1264. From that time they were held by various native chieftains in vassalage to the Scottish monarch, until they came under the sway of one powerful chief, who assumed the title of "Lord of the Isles" in 1846, and effected entire independence of Scotland. In 1748 all hereditary jurisdictions were abolished, and for the first time, under a just and powerful government, the peace of the islands was secured.

Hebron. A place in Palestine, about 20 miles a little west of south from Jerusalem, and one of the oldest existing cities in the world. The Maccabees recovered it from the Edomites, who had taken it after the Captivity. It was burned by an officer of Vespasian just before the destruction of Jerusalem. It was taken by the Arabs in 637, and by the Crusaders about 1100; and ever since 1187 has been in the hands of its present masters, the Mohammedans.

Hedge. To surround for defense; to fortify; to guard; to protect; to hem. To surround so as to prevent escape.

Hedjrah. See **HIGRA**.

Heel. That part of a thing corresponding in position to the human heel; the lower back part, or part on which a thing rests. In a small-arm it is the corner of the butt which is upwards in the firing position.

Heel-piece. Armor for the heels.

Hegemony. Leadership; preponderant influence or authority; usually applied to the relations of a government or state to its neighbors or confederates.

Hegira, or Hedjrah (from the Arabic *hajara*, to desert). A Mohammedan epoch, dating from the expulsion or flight of Mohammed from Mecca to Medina, July 16, 622. This flight was fixed as the great Moslem epoch by the caliph Omar, seventeen years later.

Heidelberg. A city of Germany, in Baden, situated on the Neckar, which is possessed of a celebrated university. This town has been besieged several times; it was taken by Tilly in 1622, and by Turenne in 1674.

Helder. A town of Northern Holland, on the North Sea, at the mouth of the Marsdiep, which separates it from the island of Texel. Near this place a naval battle was fought between the English and the Dutch in 1653, in which Van Tromp was killed. It was taken by the English under Sir Ralph Abercrombie in 1799; was afterwards retaken by Brewe, and subsequently rendered a first-class fortress by Napoleon I. It is connected with Amsterdam by the famous Helder Canal.

Helena, Saint. An island in the Atlantic Ocean, which presents to the sea, throughout its whole circuit, an immense wall of perpendicular rock, from 600 to 1200 feet high. This island was discovered by the

Portuguese in 1502, and belonged to the Dutch from 1610 to 1650, when it fell into the hands of the British. It is chiefly famous for having been the place in which Napoleon I. was confined by the allied powers after his final overthrow at the battle of Waterloo. Here he lived at Longwood, from November, 1815, till his death in 1821. His remains also lay here till 1840, when, by the permission of the English government, they were conveyed to France.

Helepolis. In the ancient art of war, a machine for battering down the walls of a place besieged. The invention of it is ascribed to Demetrius Poliorcetes. Diodorus Siculus says that each side of the helepolis was 450 cubits broad, and 90 in height; that it had nine stages, or floors, and was carried on four strong solid wheels, 8 cubits in diameter; that it was armed with huge battering-rams, and had two roofs capable of supporting them; that in the lower stages there were different sorts of engines for casting stones, and in the middle they had large catapults for launching arrows.

Heligoland. A small island in the North Sea, situated about 46 miles northwest from the mouths of the Elbe and Weser. It was taken from the Danes by the British in 1807, and became a depot for merchandise intended to be smuggled into the continent during Napoleon's continental blockade. At the peace of 1814 it was retained by England, and is of importance as an outpost in time of war.

Heliography. See LOOKING-GLASS SIGNALING.

Hellespont. See DARDANELLES.

Hellin (anc. *Illum*). A royal town of Spain, in the province of Murcia. This town was sacked by the French under Montbrun, and was the point where Joseph and Soult united with Suchet after Marmont's rout at Salamanca.

Helmet. A piece of defensive armor or covering for the head. Among the early nations of antiquity the helmet forms a prominent feature in all military costume, and is often of very great utility in distinguishing the age or country of the wearer. The Egyptian kings had them of brass, while the soldiers wore linen ones thickly padded. The crests of the royal Egyptian helmet were the heads of the lion, bull, or dragon. The Milyans had helmets of skins; those of a fox formed the early Thracian helmet; and this ancient fashion of the heroic ages appears in the *galerus* of the Roman light troops. The Phrygian bonnet was a skull-cap, with a bent peak projecting in front, like the bust of a bird, with an arched neck and head. It is certainly the most ancient form of helmet. Strabo says the ancient Persians, and probably their oriental neighbors, wore modern turbans; in war, a cap cut in the form of a cylinder or tower. This Asiatic fashion extended itself widely. The helmet of the Grecian soldier was usually made of brass, and sometimes of the skins

of beasts, with the hair still on; and to render them more terrible, the teeth were often placed in a grinning manner. The crest was made of horse-hair or feathers, and was curiously ornamented. In the early period of the Greeks, helmets had been composed of the skins of quadrupeds, of which none were more common than the dog. After the time of Alexander the Great, common soldiers had only small crests; chieftains, plumes or two crests. The helmet of the Romans was a head-piece of brass or iron, which left the face uncovered, and descended behind as far as the shoulders. Upon the top was the crest, in adorning which the soldiers took great pride. The usual ornament was horse-hair or feathers of divers colors; but the helmets of the officers were sometimes very splendid, and adorned with gold and silver. Helmets occur with cheek-pieces and movable visors. Singular helmets, with aigrettes, plumes, wings, horns, double crests, double-cheek pieces (some of which are seen on the Hamilton vases), and others, with fantastical additions and overloaded crests, are either barbarian, or subsequent to the removal of the seat of empire to Constantinople. The Gauls wore helmets of brass, with monstrous appendages for ostentation, as the shapes of birds, beasts, etc. In the Middle Ages the knights of Europe were distinguished by helmets adorned with the figure of a crown, or of some animal. The king wore a helmet of gold, or gilt; his attendants of silver; the nobility of steel; and the lower orders of iron. In European armies helmets are worn by the horse-guards and heavy cavalry. In the United States, helmets made of felt and adorned with horse-hair plumes are worn by light artillery and cavalry troops.

Helmet-shaped. Shaped like a helmet; galeate.

Helmetless. Destitute of a helmet; without a helm.

Helos. In ancient geography, the name of several towns, so called from their position among or near *fens*. The most important town of this name was in Laconia, at the mouth of the Eurotas, in a plain close to the sea. In the Dorian conquest of the Peloponnesus Helos was taken, and its inhabitants carried off to Sparta and reduced to slavery. Their name is said to have been applied by their masters generally to all the bondsmen or helots that fell into their power.

Helots. The lowest class of the population of ancient Sparta, which was formed of serfs or slaves. They are supposed to have formed the original population of the country, and to have been reduced to bondage by their Dorian conquerors. In war, they served as light troops, each free-born Spartan who bore heavy armor being accompanied to battle by a number of them, sometimes as many as seven. In order to keep their numbers within bounds the Spartans organized secret companies, who went abroad over the country armed with daggers, and both by

night and day assassinated the unfortunate Helots, selecting as their special victims the strongest and most vigorous of the oppressed race.

Helsingfors. A fortified town and seaport in Finland, on a peninsula in the Gulf of Finland. It has a good harbor, and is defended by the almost impregnable citadel and fortifications of Sweaborg, which stand on a number of rocky islands at the entrance of the harbor. This town was burnt in 1741, during the war between Sweden and Russia. In 1855, Sweaborg was bombarded for two days by the allied English and French fleet, when some damage was done to the interior defenses of the place.

Helvetian Republic. Switzerland having been conquered by the French in 1797, a republic was established in 1798 with this title.

Helvetii. A Celtic people inhabiting, according to Cæsar, the region between the mountains of Jura on the west, the Rhone on the south, and the Rhine on the east and north, the region corresponding pretty closely with modern Switzerland. The great and fatal event in their history is their attempted irruption into and conquest of Southern Gaul, in which they were repulsed by Cæsar with frightful slaughter in 58 B.C., and compelled to return to their own country, where they became subjects to the Romans. In the commotions which followed the death of Nero, the Helvetians met with another terrible catastrophe. Remaining faithful to Galba, they were fallen upon by Cæcina, a general of Vitellius, who gave them up to the rapacity of his legions, and from this time they scarcely appear in history as a distinct people.

Helvoetsluys. A fortified town of Holland, on the south shore of the island of Voorn, 17 miles southwest from Rotterdam. At this place the Prince of Orange, afterwards William III., embarked for England in 1688. It was taken by the French in 1798, and evacuated by them in 1818.

Hem In. To surround an enemy, whether on land or sea.

Hemerodromi. In Grecian antiquity, were, as the name imports, runners or couriers, who could keep running all day. In a country like Greece, where the roads were few and bad, the hemerodromi were indispensable for the rapid diffusion of important news. Every Greek state made a point of training a number of these men who could travel great distances in an incredibly short space of time, and at every dangerous crisis they were stationed on commanding points to observe and report at headquarters what it was necessary for the authorities to know. In the service of the Persian kings, these men were called *angoroi*, and the service *angereion*. Among the Romans these couriers were known as *cursores*; they traveled sometimes on foot, sometimes on horseback. It is a well-known fact that running footmen attended the Duke of Marlborough in

his wars in the Low Countries and in Germany. In the Byzantine empire they were employed as sentinels at the gates of towns. When the gates were opened they were obliged to patrol round the outskirts of the town during the whole day. Frequently, indeed, they advanced considerably into the country, in order to discover whether any hostile body of men was approaching in order to surprise the garrison.

Henery Isle. A small island lying due south from Bombay. In 1790 it belonged to Ragojee Angria, and was a principal rendezvous of pirate vessels, though within sight of Bombay. Near it is another small island named Kenery, which is also fortified, and of considerable strength. It was taken possession of and fortified by Sevajee in 1679. In 1790 it belonged to the Peshwa, and was also the haunt of pirates.

Heneti. An ancient people in Paphlagonia, dwelling on the river Parthenius; fought on the side of Priam against the Greeks, but had disappeared before the historical times. They were regarded by many ancient writers as the ancestors of the Veneti in Italy.

Hengestdown. In Cornwall, England. Here Egbert is said to have defeated the Danes and West Britons in 835.

Hennebon. A town of France, in the department of Morbihan, on the Blavet. It was formerly a very strong place, and was successfully defended by the Countess of Montfort, when it was besieged by Charles de Blois, in 1342.

Henry Rifle. See MAGAZINE GUNS.

Hephestion, or Hephæstion. A Macedonian courtier and commander, the son of Amyntor of Pella; became a favorite of Alexander the Great, whom he followed in the invasion of Persia and India. In the return of this expedition, Hephestion and Craterus commanded a separate part of the army. He died in 325 B.C.

Hep-pah, or Hippa. A New Zealand fort, or space surrounded with stout palisades.

Heptarchy. A government of seven; said to have been established by the Anglo-Saxons in England before the reign of Egbert (800-836 A.D.). Under Egbert, Wessex rose to be supreme, and virtually swallowed up the others. The common idea is that these seven kingdoms were contemporaneous; but all that can be safely asserted is, that England in this time was peopled by various tribes, whose leading occupation was war; and that sometimes one was conquered, sometimes another. At no time was there a counterpoise of power among seven of them, so that they could be said to have a separate, much less an independent existence. Still, seven names do survive, so as to use the term Heptarchy.

Heraclea. In ancient geography, a large and important city of Magna Græcia. It was situated in Lucania, between the small streams Siris and Aciris, a little way inland from the shore of the Tarentine Gulf. It

seems to have been colonized about 482 B.C. In the wars with Pyrrhus it sided with Tarentum against Rome; but it afterwards abandoned its parent state and became an ally of the Roman people. It suffered severely during the Social war, but still retained a considerable measure of importance and prosperity. It afterwards fell into decay.

Heraclea. Surnamed Minoa; in ancient geography, a Greek city of Sicily, at the mouth of the Halycus (now the *Platani*), 20 miles north-west from Agrigentum. The surname seems to have been originally the name of the town, which is first mentioned in history as a colony of Selinus. About the end of the 6th century it was recolonized by the Spartans, and had attained to great prosperity and power, when it was destroyed by the jealousy of the Carthaginians. After remaining in their power for about 200 years it fell into the hands of Agathocles, and then of Pyrrhus. It was next recovered by the Carthaginians, who retained it to the end of the first Punic war, when the whole of Sicily was made over to the Romans. In the second Punic war it reverted to the Carthaginian sway, but was finally attached to the Roman empire by Marcellus, shortly after the fall of Syracuse. After the servile war, Heraclea was repopled by the Romans, and continued to flourish till the time of Cicero. It afterwards sunk into decay, and at this day its very ruins can hardly be traced.

Heracleidæ. This term means, in its widest sense, all the descendants of Heracles (Hercules), of whatever time, and in whatever district of Greece; but is specially applied to those adventurers who, founding their claims on their supposed descent from the great hero (to whom Zeus had promised a portion of the land), joined the Dorians in the conquest of the Peloponnesus. There were five different expeditions, the last and greatest occurring eighty years after the Trojan war. The story of the return of the Heracleidæ touches on the historical period, and though there is much of fable and tradition, yet there seems to be also a large substratum of truth in the records of the Greek historians.

Heracleum. A place near Gindarus, in the Syrian province of Cyrrhæstia, where Ventidius, the legate of M. Antony, gained his great victory over the Parthians under Pacorus in 88 B.C.

Herald. An officer in the European courts, whose duty consists in the regulation of armorial bearings, the marshaling of processions, and the superintendence of public ceremonies. In the Middle Ages heralds were highly honored, and enjoyed important privileges; their functions also included the bearing of messages between royal personages, and registering all chivalric exercises; the computation of the slain after battle; and the recording of the valiant acts of the falling or surviving combatants. The office of herald is probably as old as the origin of coat-armor. In England the principal her-

aldic officers are designated *kings-of-arms*, or *kings-at-arms*, and the novitiates or learners are styled *pursuivants*. There are in England three *kings-at-arms*, named by their offices Garter, Clarenceux, and Norroy; six heralds,—Somerset, Chester, Windsor, Richmond, Lancaster, and York; and four *pursuivants*, called Rouge Dragon, Portcullis, Blue Mantle, and Rouge Croix. In Scotland the principal heraldic officer is the Lyon king-at-arms; and there are six heralds,—Snowdon, Albany, Ross, Rothesay, Marchmont, and Ilay; and five *pursuivants*,—Unicorn, Carrick, Kintyre, Ormond, and Bute. Ireland has one king-at-arms, Ulster; two heralds, Cork and Dublin; and two *pursuivants*, of whom the senior bears the title of Athlone, and the other is called the *pursuivant of St. Patrick*.

Heraldry. The science of armorial bearings. The practice of wearing devices on the shields of knights was originated in the middle of the 12th century, and ever since families bear on their shield the arms of their progenitors, which at first had been adopted either arbitrarily or suggested by some striking episode in the life of the bearer.

Herald's College, or College of Arms. A collegiate body, founded by Richard III. in 1483, consisting of the heraldic officers of England, who were assigned a habitation in the parish of Allhallows-the-Less, in London. Various charters confirmed the privileges of the College of Arms, and it was re-incorporated by Philip and Mary in 1554. The presidency of the college is vested in the earl marshal, an office hereditary in the family of Howard, duke of Norfolk. He nominates the three *kings-of-arms*, six heralds, and four *pursuivants*, who are the members of the collegiate chapter. The members of the college have salaries, but derive their principal income from fees charged for assistance in tracing pedigrees and titles, and for the granting and registration of arms. In Scotland the corresponding functions belong to the Lyon court. See LYON KING-AT-ARMS.

Herat. A city of Afghanistan, the capital of an independent state, situated in a plain near the Hury River, 860 miles west from Cabul. This place has often been ravaged by various conquerors, who have claimed and won the empire of Asia. In 1220 it was taken by Genghis Khan, and in 1398 by Tamerlane. It was subsequently united to Persia; but the Afghans took possession of it in 1716. Nadir Shah retook it in 1737, and Ahmed Khan, an Afghan, and one of Nadir's generals, added it to Afghanistan, after the assassination of Nadir Shah, in 1747. Mohammed Shah marched against Herat in 1886, and, after a long siege, the Persians were forced to withdraw. In 1855 the Persians again made an attempt to get possession of Herat; but, after a short war with England, desisted.

Hercotectonique (*Fr.*). A term in fortification signifying that branch of military

architecture which specifically points out the best means of defense and the surest method of providing stores. This word is derived from the Greek.

Herculean. Very great, difficult, or dangerous; such as it would require the strength or courage of Hercules to encounter or accomplish.

Hercules, Pillars of. The name given by the ancients to the two rocks forming the entrance to the Mediterranean at the Strait of Gibraltar. Their erection was ascribed by the Greeks to Hercules, on the occasion of his journey to the kingdom of Geryon.

Herefare. An old term from the Saxon, signifying the same as warfare.

Hereford. The chief town of Herefordshire, England, on the Wye. During the Saxon era, the Welsh inflicted considerable damage on this city; it also suffered greatly in the wars of the barons, and under the Plantagenets. During the civil war it held loyalty to the cause of the king, and was one of the last places that yielded to the Parliament.

Heregeld. A term derived from the Saxon, signifying a tax which was formerly levied for maintaining an army.

Herera. In Aragon. Here Don Carlos of Spain, in his struggle for his hereditary right to the throne, at the head of 12,000 men, encountered and defeated (August 24, 1887) Gen. Buerens, who had not much above half that number of royal troops.

Hereslita, or Heresilia. A term derived from the Saxon, signifying a soldier who abandons his colors, or deserts the service.

Heretoch, or Heretog. The leader or commander of an army; also, a constable; a marshal.

Heretum. A court in which the guards or military retinue that usually attended the old British nobility and bishops were accustomed to parade or draw up.

Hergate. A term derived from the Saxon, signifying a tribute which was paid in ancient times to the lord of the soil, to enable him to carry on a war.

Herisson. A formidable hedge or chevaux-de-frise; made of one stout beam fenced by a number of iron spikes, and which, being fixed upon a pivot, revolves in every direction upon being touched, always presenting a front of pikes.

Hermadad (Sp.). "Brotherhood." An association of the principal cities of Castile and Aragon, bound together by a solemn league and covenant for the defense of their liberties in seasons of trouble. The most noteworthy (called *Santa Hermadad*, or Holy Brotherhood) was established in the middle of the 18th century in Aragon, and in Castile about thirty years later; while in 1296, 85 cities of Castile and Leon formed a joint confederacy, and entered into a compact, by which they pledged themselves to take summary vengeance on every noble who had either robbed or injured a member of their association, and refused to make

just atonement for the wrong; or upon any one who should attempt, even by the order of the king, to levy an unjust tax. Isabella of Castile, seeing the beneficial effects which an extension of the institution was capable of producing, obtained the sanction of the Cortes for its thorough reorganization and extension over the whole kingdom in 1496. In 1498, the objects of the *Hermadad* having been obtained, and public order established on a firm basis, the brotherhood was disorganized and reduced to an ordinary police, such as it has existed, with various modifications of form, to the present century.

Hermينيا Gens. A very ancient patrician house at Rome, which appears in the first Etruscan war with the republic, 506 B.C.; vanishes from history in 448.

Hermunduri. One of the most powerful nations of Germany; belonged to the Suevic race. They were for a long time the allies of the Romans; but along with the other German tribes they assisted the Marcomanni in the great war against the Romans in the reign of M. Aurelius. After this time they are rarely mentioned as a separate people, but are included under the general name of Suevi.

Hernici. A people in Latium; belonged to the Sabine race. They inhabited the mountains of the Apennines between the Lake Fucinus and the river Trerus. They were a brave and warlike people, and long offered a formidable resistance to the Romans. They were finally subdued by the Romans in 306 B.C.

Hero. A man of distinguished valor, intrepidity, or enterprise in danger; a prominent or central personage in any remarkable action or event; hence, a great, illustrious, or extraordinary person.

Hero. In mythology, an illustrious man, supposed by the populace to partake of immortality, and after his death to be placed among the gods.

Heroic. Pertaining to, or like, a hero or heroes; as, heroic valor. Becoming a hero; bold; daring; illustrious; as, heroic action; heroic enterprises.

Heroic Age. The age when the heroes, or those called the children of the gods, are supposed to have lived.

Heroically. In the manner of a hero; with valor; bravely; courageously; intrepidly; as, the town was heroically defended.

Heroine. A female hero; a woman of a brave spirit. The principal female person who figures in a remarkable action.

Heroism. The qualities of a hero; bravery; courage; intrepidity.

Heroship. The character of a hero.

Herrings, Battle of the. Fought on February 12, 1429, when the English were besieging Orleans. It obtained its name from the Duc de Bourbon attempting to intercept a convoy of salt fish on the road to the English camp before Orleans, and in which he was defeated.

Herse (from the Fr. *herise*). In fortifica-

tion, a grated door, formed by strong pieces of wood joined crosswise, and stuck full of iron spikes. It is usually hung by a rope, and fastened to a moulinet, which is cut in case of a surprise, or when the first gate is forced by a petard, so that it may fall like a portcullis and stop the passage of a gate or other entrance of a fortress.

Hersillon. A strong beam, whose sides are stuck full of spikes, which is thrown across the breach made by an enemy to render it impassable.

Hertford. The capital of Hertfordshire, England, on the Lee. It is a very ancient town: the castle was founded in 909. In the reign of John it was seized by the French dauphin, and under Edward III. the kings of France and Scotland were secured in it.

Heruli. An ancient German tribe, first mentioned among the Gothic nations when these latter had established themselves on the north coast of the Euxine, in the reigns of Gallienus and Claudius. In the reign of Valentinian they are mentioned as being in the service of Rome, fighting against the Alemanni. In the 5th century they allied themselves with the other German tribes, and under Odoacer, in 476, they overthrew the Western empire.

Hesse. A territory in Western Germany, the seat of the Catti; formed part of the empire of Charlemagne; from the rulers of it in his time the present are descended. It was joined to Thuringia till about 1268, when Henry I. became landgrave of Hesse. The most remarkable of his successors was Philip, who signed the Augsburg Confession in 1560, and the League of Smalcald in 1581. At his death Hesse was divided in Hesse-Cassel and Hesse-Darmstadt, and in 1803 the former became an electorate, and the latter a grand duchy. Hesse-Cassel was incorporated with Prussia in 1866, and Hesse-Darmstadt became a part of the North German Confederation in 1867, and as such it took part in the Franco-Prussian war in 1870.

Hessians. Troops belonging to Hesse-Cassel, Prussia. They have been frequently hired by Great Britain, particularly in the war of American independence, when they were sold at £40 sterling a head, £9 of which was to be repaid if they returned alive.

Hetman, or Ataman. A word derived from the German, which signifies the chief of a troop. The chief general of the old Polish armies was called *Hetman Wielki*, and the second general *Hetman Polny*. The chief or general of the Cossacks is likewise invested with this title by the czar of Russia.

Heurtequins (Fr.). Two pieces of iron resembling a knocker, which are placed over the trunnions, or axis of a cannon.

Heuse (Fr.). An iron shoe, sometimes called *pedicuz*, attached to the greaves of ancient armor, having an iron sole, and the upper composed of mail.

Hexagonal Powder. See GUNPOWDER.

Hexham. A town of England, in North-

umberland, situated a little below the confluence of the north and south Tyne, 21 miles west from Newcastle. This town is chiefly remarkable for the antiquities with which it is surrounded, and the historical events connected with it. The neighborhood abounds with ruined castles, monuments of battles and heroes; with Roman relics, altars, inscriptions, etc. The cathedral, or priory church of Hexham, was founded in 674, and was destroyed by the Danes. In 1463, a battle was fought in the neighborhood between the houses of York and Lancaster, in which the Yorkists gained the victory. As an interesting historical event, it may be remarked that it was in flying from this field that Queen Margaret threw herself on the protection of a robber, and the cave in which she concealed herself and the Prince of Wales is still pointed out.

Hibernia, Ibernia, Ivernia, and Ierne. The names by which Ireland is designated in the classical writers. See IRELAND.

Hibernian Royal School. A school established in Great Britain for the maintenance of 850 children of military officers who are supported and educated at this school, at an expense of £7000 per annum to the country.

Hierarchy, Military. The essential element for the government and service of an army is a military hierarchy, or the creation of different grades of rank, to which different functions and powers are assigned, the lower in regular subordination to the next higher in the ascending scale. It should be founded on the principle that every one acts in an army under the orders of a superior, who exercises his authority only within the limits established by law. This authority of the superior should be greater or less according to rank and position, and be proportioned to his responsibilities. Orders should be executed without hesitation; but responsibilities should be confined to him who gives orders in virtue of the superior authority with which he is invested; to him who takes the initiative in an order; to him who does not execute an order that he has received; and to him who usurps a command, or continues illegally to exercise its functions. The military hierarchy is determined and consecrated within its sphere of action by grades of rank created by military laws, by other laws regulating the exercise of rank, by military insignia, by military honors, and by the military oath.

High Treason. Treason against the state, being the highest civil offense. See TREASON.

Highlanders. Properly speaking, are the Celtic inhabitants of the Highlands of Scotland. In the army of Great Britain, it denotes the eight regiments who are uniformed in the Highland dress, including a distinctive tartan, and are as follows: 42d (see BLACK WATCH), 71st, 72d, 74th, 78th, 79th, 92d, and 98d. These regiments are recruited in the Highlands.

Hilt. The handle of anything, especially of a cutting instrument, as a knife or sword.

Hilted. Having a hilt. Also a term used in heraldry to indicate the tincture of the handle of a sword.

Hilton Head. A village on an island of the same name, forming part of Beaufort District, S. C., at the mouth of Broad River. It was taken from the Confederates by the U. S. forces after a severe naval engagement in November, 1861.

Himera. A celebrated city on the north coast of Sicily. Here the Carthaginians were defeated with great slaughter by the united forces of Theron and Gelon of Syracuse, 480 B.C. It assisted Syracuse against the Athenians in 415 B.C. In 409 B.C. it was taken by Hannibal, the son of Gisco, who, to revenge the great defeat which the Carthaginians had suffered before the town, leveled it to the ground, and destroyed almost all the inhabitants.

Hindustan. See INDIA.

Hircarrah, or Hircarra. An Indian term for a messenger, guide, footman, or spy.

Hiring of Duty. See APPENDIX, ARTICLES OF WAR, 36, 37.

Hirpini. An inland people of Italy who inhabited the southern portion of Samnium. In the early history of Rome the Hirpini are found identifying themselves with their Samnite neighbors against their common foes. They seem to have been subdued in the early part of the 3d century B.C. They appear as an independent people in the second Punic war. Revolting from their old conquerors, they joined the Carthaginian invaders, and, though they were unable to recapture their stronghold of Beneventum, they remained faithful to Hannibal till the defeat at the Metaurus restored the empire of Italy to his opponents. In the year of that event the Hirpini made their peace with their old masters by betraying into their hands the garrisons of their allies. From this time till the outbreak of the Social war, the Hirpini seem to have continued steadfast in their allegiance. On that occasion, however, they set the example of revolt to the allies, and might have become formidable enemies, had not the rapid successes of Sulla induced them to repair their error by complete submission. After the close of the war the Hirpini do not appear in history as an independent people.

Hispalis. See SEVILLE.

Histiæa. An ancient city of Eubœa. It was taken by the Athenians during the Persian wars, but they revolted from that people, and was again subdued, the old inhabitants of the city were expelled, and 2000 Athenian colonists settled in their stead, and its name changed to *Oreus*. In the war between Philip and the Greeks, Oreus was frequently contested, and in 200 B.C. it was stormed by the Romans.

History, Military. A narrative of military transactions, campaigns, battles, sieges, marches, etc., of an army. It likewise

means a relation of the heroic actions of great generals, etc.

Hit. To reach with a stroke or blow; especially, to reach or touch an object aimed at, as a mark; to strike or touch, usually with force. Also a striking against; the collision of one body against another; the stroke or blow that touches anything.

Hitch. A knot or noose in a rope for fastening it to a ring or other object; as, a clove hitch, a timber hitch.

Hivites. A Canaanitish people, who in the time of Jacob are found occupying the uplands of Ephraim, and later the slopes of Hermon and region westward towards Tyre. They were conquered by the Hebrews, and they became menial subjects of Solomon.

Hobeliers. In the Middle Ages, a species of light horsemen, chiefly intended for reconnoitring, carrying intelligence, harassing troops on a march, intercepting convoys, and pursuing a routed army; the smallness of their horses rendering them unfit to stand the shock of a charge. Spelman derives the name from *hobby*, a small horse. Camden used the word *Hoblers* for certain light horsemen, who were bound by the tenure of their lands to maintain a light horse, for giving notice of any invasion made by enemies, or such like peril towards the sea-side.

Hobits. Small mortars of 6 or 8 inches bore mounted on gun-carriages; they were in use before the howitzer.

Hochebos (Fr.). Certain soldiers among the ancients, who were so called from their brandishing the pike. This word has likewise been applied to the pike itself.

Hochkirch. A village of Saxony, 7 miles southeast of Bautzen. Here Frederick the Great was completely defeated by the Austrians under Daun, October 14, 1758. A conflict between the Russians and Prussians and the French, in which the latter were victorious, took place here May 22, 1813.

Hochstadt. A town of Bavaria, situated on the left bank of the Danube. It is noted for a battle, generally known as the battle of Blenheim (which see), in which the French and Bavarians were defeated by the Duke of Marlborough and Prince Eugène, and which took place between this town and Blenheim in 1704. In 1800, the French under Moreau totally defeated the Austrians near here.

Hohenlinden. A village of Bavaria. It is noted for the defeat of the Austrian army in 1800, by the French under Moreau.

Hohenstaufen. A celebrated family of German princes, which kept possession of the imperial throne from 1138 to 1254, and died out in 1268. The first of the line was Friedrich von Bûren, who received the name on account of having removed his dwelling from a valley *auf den Staufen* ("up the hill" or "mountain"). His son Friedrich von Staufen, or Hohenstaufen, served under Henry IV., and distinguished himself greatly in the battle of Merseburg, for which the king awarded him the duchy of Swabia. He also fought against the pope in Italy,

while holding the position of regent of Germany. Died in 1105.

Hohenzollern. The name of an ancient princely German family, from which the kings of Prussia are descended. The name is derived from the castle of Zollern, in Swabia, which is said to have been built by Tassillon or Thasilio about 800.

Hoist. To raise; to lift, or bear upward by means of tackle, as a flag, etc. The perpendicular height of a flag, as opposed to the *fly*, or breadth from the staff to the outer edge.

Hold. A place of security; a fortified place; a fort; a castle; often called a *stronghold*.

Hold. To keep one's self in a given position or condition; to remain fixed; as, not to move; to halt; to stop. Not to give way; not to part or become separated; to remain unbroken. *To hold one's own*, to keep up; not to lose ground or be left behind.

Hold Out, To. To maintain any place, ground, etc., resolutely against an enemy.

Hold-all. A portable case for holding small articles required by soldiers, marines, etc.

Holland. A kingdom in Northwest Europe, the chief part of the Northern Netherlands, composed of land rescued from the sea, and defended by immense dykes. It was inhabited by the Batavi in the time of Cæsar, who made a league with them. It became part of Gallia Belgica, and afterwards of the kingdom of Austria. From the 10th to the 15th century it was governed by counts under the German emperors. It was conquered by the French in 1795, and subsequently brought into the condition of a province of France under Napoleon; the emperor's brother, Louis, being created king of Holland. It was delivered from the French yoke in 1813. See NETHERLANDS.

Hollow Projectile. Shell, case-shot, etc. See PROJECTILES, etc.

Hollow Square. The form in which a body of foot is drawn up with an empty space in the middle for the colors, drums, baggage, etc. A body of troops formed into a square to resist the charge of cavalry on critical occasions.

Hollow Tower. A rounding made of the remainder of two brisures, to join the curtain to the orillon, where the small shot are placed, that they may not be so much exposed to the view of the enemy.

Hollow Way. Any pass or road, both sides of which are commanded by heights.

Holstein. An extensive duchy of Germany, formerly a dependency of Denmark. The king of Denmark had originally a seat at the German Diet on account of his Holstein possessions, but in 1806, on the formation of the Confederation of the Rhine, this privilege was lost; but in 1815 he was admitted into the Germanic Confederation. In 1848 this duchy, with Schleswig, attempted to gain its independence; but, after some severe fighting, it was reduced to obe-

dience in 1850. In 1863 the struggle was renewed; and, under the pretext of separating this duchy, together with that of Schleswig, from Denmark, and of annexing it to the Germanic Confederation, an allied Austrian and Prussian army invaded the country and drove out the Danes, after a short but desperate struggle. It was annexed to Prussia after the Prussian-Austrian war (1866), and now forms a part of the North German Confederation.

Holsters. Leathern cases for pistols, affixed to the pommel of the saddle. They are frequently covered with wool or fur, to prevent injury to the rider in the event of his being thrown forward upon them. They are also worn on a belt.

Holstered. Bearing holsters; as, a holstered steed.

Holy Alliance. A league formed after the fall of Napoleon by the sovereigns of Russia, Austria, and Prussia, nominally to regulate the relations of the states of Christendom by the principles of Christian charity, but really to preserve the power and influence of the existing dynasties. Most of the other European rulers acceded to it, and the treaty was made public February 2, 1816. A special article of the treaty excluded forever the members of the Bonaparte family from any European throne. But after the secession of England and France the alliance became practically obsolete.

Holy Ghost, Order of the. A Roman Catholic order consisting of hospital knights, which was founded in the 12th century, and ceased to exist as a knightly order in 1700.

Holy Island, or Lindisfarne. An island off the coast of Northumberland, 8 miles southeast from Berwick-on-Tweed, and is connected with the mainland by a narrow isthmus or neck of sand. On the south of the island lies the town, and near it are the ruins of an old abbey which the Danes destroyed in 900.

Holy League. A name applied to several combinations of sovereigns or princes of Europe for warlike or defensive purposes. The first was organized in 1610 by the pope, Venice and Spain against Louis XII. of France. But the most important of all was the *holy league*, so called by way of eminence, which was organized at Perone in 1576, and lasted till 1598, to prevent the accession of Henry IV. of France to the throne.

Holy Sepulchre, Knights of the. An order of knighthood instituted probably by Pope Alexander VI., for the guardianship of the Holy Sepulchre, and the relief and protection of pilgrims. The pope was originally the grand master, but he subsequently ceded his rights to the Guardian Father of the Holy Sepulchre. The knights must, by the rules of the order, be all of noble descent; they were bound to hear mass daily, to fight, to live, and to die for the Christian faith, etc. In return for these duties, the

knights had the most unusual and extraordinary privileges conferred on them; they were exempt from taxation, could marry, and yet possess church property, legitimize bastards, cut down and bury the bodies of criminals who had been hanged. On the recapture of Jerusalem by the Turks, the knights retired to Italy, and settled at Perugia. After a temporary union with the Hospitallers, the order was reconstructed in 1814 both in France and in Poland, and is still in existence within a very small circle of knights elected by the Guardian Father from the most respectable pilgrims who come to Jerusalem.

Holy Wars. See CRUSADE.

Homelden. In Northumberland, England, where the Scots, headed by the Earl of Douglas, were defeated by the Percies (among them Hotspur), September 14, 1402.

Home-service. Consists in military operations and arrangements for the immediate defense of our own country, should it be threatened by invasion, or by domestic broils or insurrections.

Homme d'Armes (Fr.). A military phrase among the French, signifying a gentleman or cavalier who belonged to one of the old companies, was armed *cap-a-pie*, and always fought on horseback. In ancient times, every man of this description was accompanied by two horsemen independent of his servants. One of the mounted attendants was armed with a cross-bow, and the other with a common bow or battle-axe; so that 100 *hommes d'armes* composed a body of 300 horse. It was a species of cavalry which existed from the reign of Louis XI. until the reign of Henry II.

Honduras. A republican state of the confederation of Central America; being bounded north by the Caribbean Sea and Bay of Honduras, southeast by the Mosquito Territory and Nicaragua, south by San Salvador and the Bay of Conchagua, on the Pacific, and west by Guatemala.

Honeycomb. A defect in guns resembling the cells of wax in which the bee stores her honey. These flaws in the metal arise either from careless or imperfect casting, or from long disuse of a gun and exposure to damp. A honeycombed gun is liable to burst in firing.

Hong-Kong. An island off the coast of China; was taken by Capt. Elliott, August 28, 1839, and ceded to Great Britain, January 20, 1841.

Honi Soit Qui Mal y Pense (Fr.). See GARTER, ORDER OF THE.

Honor. In a general acceptance may be properly called a consciousness of worth and virtue in the individual, and a lively desire to preserve the reputation of virtue. As a term, it is variously used in military life. As a quality of the mind, it cannot be too much encouraged or too much cultivated among military men of all ranks and descriptions. The possession of it is a guarantee for good conduct, a bond of fidelity,

and a certain barrier against military corruption. Men are excited to deeds of valor and enterprise by a sense of honor, who would otherwise remain inactive, or only perform the mere drudgery of service. This term may likewise be considered as esteem, reputation, the glory which is attached by mankind to talents and virtues.

Honor, Affair of. A transaction connected with a duel, or a challenge to fight a duel; a duel itself.

Honor, Court of. Is a species of board of inquiry, which has not only the power of ascertaining the degree of guilt which may be attached to misconduct, but of pronouncing an opinion which may or may not entail ignominy upon the guilty persons. See COURT OF HONOR.

Honor, Debt of. An obligation which among honorable men, especially officers, is more binding than those engagements or contracts that are guaranteed by law. The reason is manifest.

Honor, Point of. A nice discrimination in matters affecting one's honor. A delicacy of feeling, which is generally acquired by education, and strengthened by intercourse with men of strict integrity and good conduct. It is likewise very frequently the offspring of peculiar habits, received notions, and established etiquettes; also, a minute distinction; a punctilio.

Honor, Signatures upon. Are instruments, such as declarations of officers on vouchers for allowances, pay, etc., that are guaranteed by the names of individuals, without oath.

Honor, Word of. A promise or engagement that is made or entered into by word of mouth, the breach of which entails disgrace upon the violator. *To die upon the bed of honor*, is a term particularly applied to military men, who die in battle fighting in their country's cause.

Honors of War. A compliment granted on capitulation to a garrison which has made a gallant defense. The exact nature of the honors accorded have varied in different ages and on different occasions. Ordinarily they are as follows: The garrison marches out through the gap in the breach, if there is one, with arms and personal baggage. The drums beat, the colors fly, officers carry their swords drawn, and the men their bayonets fixed. A certain number of guns—ordinarily two—accompany the force, and formerly the gunners carried lighted matches. On reaching the glacis the garrison—unless it is one of the stipulations that it is to join the main army—forms up and grounds arms, only the officers retaining their swords, and is marched off under escort.

Honvéd. The name given in Hungary under the earlier kings to the national champions. With the disappearance of these, the word too disappeared; but in the summer of 1848 it was revived, and applied first to those Hungarian volunteers dispatched to the south against the Servians,

and subsequently, when the war with Austria really commenced, to the whole patriotic army. Still, in common parlance, the term *honvéd* is used only with reference to the Hungarian infantry.

Hood (Sp. *tapadera*). A leather cover for the stirrup of a saddle.

Hooghly. A town of Bengal, and the capital of a district of the same name, situated on the west bank of the Hooghly River, 27 miles north from Calcutta. This place is supposed to have been founded by the Portuguese about 1538, and after their expulsion in 1632 by the Mogul troops, it became the imperial port of the Mogul empire. In 1757 it was taken by the British; it was retaken shortly after by Surajah Dowlah, but ultimately fell, after a few months, into the hands of the British under Lord Clive.

Hooks. Pieces of bent iron fixed to the transom plates of a field-carriage are so called. They serve to fix the bricoles or ropes for drawing it occasionally backwards or forwards.

Hookum. An Indian word, signifying order or command.

Hookummaumeh. In India, signifies a letter of instructions, or the paper that contains orders.

Hoplital (Fr. *hoplites*). Foot-soldiers among the Greeks, who bore heavy armor, and engaged with broad shields and long spears. These took precedence of all other foot-soldiers.

Horde. A wandering troop or gang; especially a clan or tribe of a nomadic people possessing no fixed habitations, but migrating from place to place for the sake of pasturage, plunder, or the like cause.

Hordearium. The money which the Romans gave their cavalry for the sustenance of their horses.

Horion (Fr.). A term which formerly signified a helmet, and which in the vulgar acceptance of it now, among the French, means a blow upon the head.

Horizon (Gr. *orizo*, I bound or terminate). In astronomy and geography, is the plane of the great circle of the sphere, dividing the visible from the invisible hemisphere. The horizon is either *sensible* or *rational*. The sensible horizon is a plane which is a tangent to the earth's surface at the place of the spectator, extended on all sides till it is bounded by the sky; the rational horizon is a plane parallel to the former, but passing through the centre of the earth. Both the sensible and rational horizon are relative terms, and change with every change of the spectator's position on the surface of the earth; in all cases they are perpendicular to the direction of gravity.

Horizontal Fire. The fire of guns and howitzers under low angles of elevation.

Horizontal Plane. That which is parallel to the horizon; a plane tangent to the surface of the earth, at the place.

Horizontal Range. In gunnery, is the distance to which a piece of ordnance will

project a ball on a horizontal plane. Supposing no resistance from the atmosphere, the greatest range would be when the piece is elevated at an angle of 45° ; and in all other positions the horizontal range would be as the sine of twice the angle of elevation. In a resisting medium the maximum horizontal range requires the elevation to be less than 45° . It is found by experience that, with the ordinary velocity, a cannon-shot ranges the farthest when the elevation of the piece is about 30° .

Hornwork. A kind of work in advance of a fortification, akin to a crown-work, but consisting of only one curtain and two half-bastions.

Hors de Combat. A French military phrase, signifying that an individual or body of men are so completely beaten as not to be able to maintain the field of battle. *Mettre hors de combat*, to drive your opponent before you; to press him so closely that he cannot make a stand against you; to put him out of the lists of contests. To be wounded or incapable of individual effort, is also being *hors de combat*.

Horse. A military term for a body of cavalry.

Horse Artillery. Is that portion of the artillery which usually serves with cavalry, and in which the cannoneers are mounted on horseback, to enable them to conform with the rapid movements of that arm of the service. Possessing, from their lighter construction and mounted detachments, much greater locomotive powers than other field-batteries, they are especially adapted for following the rapid evolutions of cavalry, for sudden attacks upon particular points, and for supporting the advance, or covering the retreat of an army.

Horse, Associated. A body of cavalry so called in the days of Cromwell. At the famous battle of Naseby (June 14, 1645), which decided the fate of Charles I., the Associated Horse were posted in the rear of the right wing of the Republican army, and formed a part of the reserve. Cromwell commanded the cavalry on the right of the whole, and the Associated Horse were under his immediate orders.

Horse, Cavalry and Artillery. Horses generally make in a minute, at ordinary pace, 120 steps, and they cover 110 yards; at a trot, 180 steps, covering 220 yards; and at a gallop, 100 steps or strides, covering 352 yards; from which it would appear that the length of the stride at the ordinary pace is about 0.917 yard, and that the velocity corresponds to about 1.74 yards per second; and at a trot the stride is about 1.23 yards and the speed about 3.68 yards per second; and at a gallop the stride is about 3.52 yards, with a speed of about 5.87 yards per second. A good horse carrying a weight of 225 pounds, can travel, without over-exertion, 25 miles in a day of from seven to eight hours; his speed in this case would be between 1.75 and 1.53 yards per second.

The weight of an average-sized horse is about from 900 to 1350 pounds. The age of the horse is determined by the appearance of the teeth, which vary according to the number of years the animal has attained, and may be easily understood by a slight attention to the subject; the number, quality, and size of the teeth indicating the respective ages. The lower front teeth or nippers are those by which the age of a colt is usually determined. At two years old these teeth will be complete; that is to say, the colt will have a full set, six in number, of milch-teeth. Between two and three years old the two centre teeth are displaced, and two permanent teeth succeed them, easily distinguished from colt's teeth by being broader, larger, and having a dark cavity in the centre of the upper surface. At three years old the colt will have in the lower jaw two permanent and four colt's teeth; between the third and fourth year the next pair of incisor teeth will be shed, and permanent teeth succeed them. At four years old there will be four permanent teeth in the centre, and two colt's teeth at each corner of the lower jaw. Between the fourth and fifth year the last remaining colt's nipper, or corner tooth, will be cast; and, if a horse or gelding, the tushes, four in number, will show themselves, two in the upper and two in the lower jaw. At five years old the horse will have a full or complete set of permanent teeth in the upper and lower jaws; for the same change that takes place in the lower is developed in the upper jaw also. The colt at this age takes the name of horse, and is supposed to be equal to all the laborious duties expected from him. Although we can no longer judge of his age by the shifting or shedding of his teeth, we can form a tolerably correct conclusion from other appearances of them. At six years old the dark oval-shaped mark in the centre of the two front nippers, usually called by horse-men "the bean," will be nearly or quite worn away; the tushes higher and stronger, and the cavities of the interior part of the tooth more filled; the two corner nippers level with the others, and equally developed. At seven years old the marks in the second pair of nippers are filled up, and the tushes become more round externally and internally. At eight years old the marks in the corner nippers are worn out, and the tushes more round and blunt. From this age the animal is said to be, in horse phraseology, "past knowledge"; and although a tolerably correct opinion may be formed for many years to come by the appearance of the upper jaw and other prognostics, still they cannot be implicitly relied on. It often occurs at a much earlier period that the best judges of age are deceived by the untimely structural alteration of the teeth, produced by mechanical or pathological causes, such as crib-biting, biting the rack or manger, eating hard food, etc. Horses used for cavalry in the United States are

selected with regard to climate, the American horse east of the Rocky Mountains, and what is known as the Mexican or *bronco*, west of the Rocky Mountains; the power of endurance of the latter being much more than that of the former, they are better adapted to the rugged, arid country than an American cavalry soldier has to travel over on the western frontier. For artillery large, strong American horses are used. A horse occupies a space in the ranks of a front of 40 inches, a depth of 10 feet; in a stall, from 3½ to 4½ feet front; at picket 8 feet by 9. Cavalry horses usually charge at the rate of 24 miles per hour, or one mile in 2½ minutes. See **PACK AND DRAUGHT HORSES**.

Horse Guards. The name was applied to a large public office in Whitehall, London, appropriated to the departments under the general-commanding-in-chief, and guarded by a squadron of Horse Guards. In 1871 the headquarters were removed to Pall Mall.

Horse Guards, Royal (Oxford Blues). Is the third heavy cavalry regiment of the Household Brigade (English). The regiment was raised in 1661 from the remnants of the disbanded army of the late Commonwealth. It took part in Marlborough's campaigns; served under the Duke of Wellington in the Peninsula and at Waterloo, and has always been considered one of the finest heavy cavalry corps in the world.

Horseman. A mounted soldier.

Horsemanship. The act or art of riding, and of training and managing horses; manege.

Horse-power. A measure for the quantity of work of which an engine or motor is capable in a given time. It is 33,000 foot-pounds in one minute.

Horse-shoe. In fortification, is a small round or oval work, with a parapet; generally made in a ditch, or marsh.

Horse-tail. A Turkish standard. Commanders are distinguished by the number of horse-tails carried before them, or planted in front of their tents. Thus, the sultan has seven, the grand vizier five, and the pashas three, two, or one.

Hospital. A place appointed for the sick and wounded men, provided with physicians, surgeons, nurses, servants, medicines, beds, etc.

Hospital, Field. Is the staff and apparatus for the surgical treatment of the wounded in the field, and the locality assigned for the resort of the latter to obtain it. In the United States there is a hospital at every military post, under the superintendence of the army medical department.

Hospital, Regimental. In Great Britain, each regiment has a hospital for the reception of the sick belonging to it. This hospital is under the immediate care of the regimental surgeon, who is subordinate to the general medical board.

Hospital Steward. In the U. S. service, is a non-commissioned officer of the

general staff, whose duty consists in making up prescriptions, administering medicines, and in a general supervision of the sick, under the instructions of an army medical officer.

Hospital Tent. A large tent used for hospital purposes. See **TENT**.

Hospitallers. A celebrated brotherhood founded at various times and in different countries for the care of the sick in hospitals. The vow to devote themselves to this work of mercy is, in all these brotherhoods, super-added to the ordinary vows of poverty, chastity, and obedience, which are common to all the religious orders in the Roman Catholic Church. One of the earliest recorded instances of a hospital served by such a brotherhood is that of Constance, in the 13th century. See **SAINT JOHN OF JERUSALEM** and **TEUTONIC KNIGHTS**.

Hospodar. A title borne by the governors of Wallachia and Moldavia, under the Turks. Although nominated by the porte, they possessed absolute power within their own dominions. By the treaty of Adrianople in 1829, the principalities were placed under Russian protection, and from that time till the treaty of Paris in 1856, the hospodars were virtually the nominees of Russia.

Host. An army; any large body of men assembled together in arms.

Hostages. Are persons given in pledge for the performance of conditions. When a town capitulates, victors and vanquished usually give into the custody, one of the other, several officers, as pledges that each party will duly carry out the terms stipulated. When the terms are fulfilled, the hostages are exchanged; but if the terms be evaded, the opposite side holds the right to put to death, or otherwise punish, the hostages in its possession; of late years the practice is going out of use.

Hostile. Belonging to an enemy; appropriate to an enemy; showing ill-will and malevolence, or a desire to thwart and injure; occupied by an enemy or a hostile people; inimical; unfriendly; as, a hostile force, hostile country, etc.

Hostilities. A rupture between the natives of different countries. The first hostile act that is committed by either party is considered the commencement of hostilities. Between nations, the first act of hostility presupposes a declaration of war.

Hosting. An encounter; a battle. A muster or review. This term is now obsolete.

Hot Shot. Shot made red-hot for the purpose of setting fire to buildings, shipping, etc. The charges for hot shot are from one-fourth to one-sixth the weight of the shot. With small velocities, the shot splits and splinters the wood, so as to render it favorable for burning. With great velocity the ball sinks into the wood, is deprived of air by the closing of the hole, and chars instead of burning the surrounding wood. It should not penetrate deeper than 10 or 12 inches.

Red-hot balls do not set fire to the wood until some time after their penetration. They retain sufficient heat to ignite wood after having made several ricochets upon water. The wads for hot shot should be made of clay or hay, the latter to be well soaked in water, and before being used, the water pressed out of it. With proper precautions in loading, the ball may be permitted to cool in the gun without igniting the charge. The piece, however, should be fired with as little delay as possible, as the vapor would diminish the strength of the powder. They are heated by means of furnaces erected for the purpose, which hold sixty or more shot. The shot being placed, and the furnace cold, it requires one hour and fifteen minutes to heat them to a red heat; but after the furnace is once heated, a 24-pounder shot is brought to a red heat in twenty-five minutes. Red-hot shot is not in general use.

Hotchkiss Projectile. See **PROJECTILE**.

Hotchkiss Revolving Cannon. Consists of five barrels grouped around a common axis; they are revolved in front of a solid breech-block, which has in one part an opening to introduce the cartridges, and another opening through which to extract the empty shells. The cartridges are fired after being revolved and while motionless in front of the solid portion of the breech. In exterior aspect it resembles the Gatling gun, but is entirely different in its interior mechanism. See **MACHINE GUNS**.

Hotchkiss Rifle. See **MAGAZINE GUNS**.

Hôtel des Invalides (Fr.). A spacious building which was erected by Louis XIV. in Paris, upon the river Seine, as a public monument of his charity and munificence. All disabled, infirm, and wounded officers and soldiers were received, lodged, and subsisted during the remainder of their lives within its walls.

Hotte (Fr.). A sort of hand-basket, which is often made use of in the construction of batteries and other works, and serves to carry earth from one place to another. Hence the word *hod*, a well-known machine for carrying bricks.

Houglines (Fr.). Parts of ancient armor covering the thighs, legs, and arms.

Hounds. Are pieces of wood used in the construction of limbers for gun-carriages to connect the splinter-bar with the axle.

Hours of Sitting (Courts-martial). See **APPENDIX, ARTICLES OF WAR, 94**.

Household Troops. See **GUARDS**.

Housing. Cover or cloth over or under a horse's saddle used for cleanliness, or as an ornamental or military appendage; a saddle-cloth; a horse-cloth.

Howitzer (derived by Grimm and Littré from the Bohemian *haufnice*, "catapult"). A short, light cannon, having a chamber intended to throw large projectiles with comparatively small charges. A howitzer is of larger caliber than a gun of like weight; is mounted in a similar manner, and is used for shorter ranges. It is said to have been

first introduced by the Dutch in the early part of the 17th century, and soon afterward came into almost general use. The Russians in 1777 introduced the *licorne*, an improved howitzer. Howitzers project larger shells than guns with which they are associated; are well adapted for ricochet fire, the destruction of field-works, breaking down palisades, and setting fire to buildings; and the projectiles used are shells, spherical-case, canister, grape, and carcasses. Howitzers, except for siege and mountain service, are no longer manufactured in the United States, as our present guns are equally suitable for shell-firing in field or garrison service. The ones now in use in the U. S. service are 8-inch and 24-pounder mountain howitzers. The former is used for siege purposes, and for the defense of ditches in fortifications. The 24-pounder flank defense howitzer, now out of use, was formerly employed for this purpose. The 8-inch howitzer has, strictly speaking, no chamber; the bore is, however, terminated by a semi-ellipsoid, the axis being 6 inches in length. This piece weighs 2600 pounds, and the shell (not filled) 45 pounds. The mountain howitzer (12-pounder) is a small, light, bronze piece about 3 feet long, weighing 220 pounds, capable of being easily removed from its carriage, and transported upon the back of a mule. The shell weighs, when strapped and charged, 9.85 pounds, and the maximum range of the piece is about 1000 yards. There are two distinct kinds of carriage used with it, one similar to the carriage of the ordinary field-piece, but smaller and lighter, the other having four wheels and called the prairie carriage. This piece has been extensively employed in our numerous Indian wars upon the plains and mountains of the West, and has done good service.

Hualpais, or Hualapais Indians. A tribe of aborigines who are located on the Colorado River near the Mojaves.

Hub. The hilt of a weapon; as, to drive a dagger into a body up to the hub.

Hubbardton. A village of Rutland Co., Vt., about 46 miles south-southwest of Montpelier. Here an American force of three regiments of Warner, Francis, and Hale, numbering about 1800, were defeated by the British under Col. Fraser, July 7, 1777.

Hubert, St., Order of. The highest Bavarian order of knighthood, founded in 1444.

Hubertsberg. A village of Saxony, 24 miles east from Leipsic. The treaty of peace, by which the Seven Years' War was ended, was signed in the royal castle of this place in 1763.

Hue and Cry. In Great Britain, an official gazette, which serves to advertise deserters from her majesty's service.

Huguenots. A term (derived by some from the German *Eidgenossen*, "confederates," by others from Hugues, a Genevese Calvinist) applied to the Reformed party in

France, followers of Calvin. They took up arms against their persecutors in 1561. After a delusive edict of toleration, a great number were massacred at Vassy, March 1, 1562, when the civil wars began, which lasted with some intermission till the edict of Nantes in 1598 (revoked in 1686). The massacre of St. Bartholomew's day, August 24, 1572, occurred during a truce.

Huissier d'Armes (Fr.). Tipstaff; an officer formerly so called in France, who was attached to the royal household. They were at first distinguished by the name of *sergens d'armes*, or sergeants-at-arms. Some were directed to bear the mace before the king during the day, and obtained on that account the appellation of *huissiers d'armes*; in later times they were called the *huissiers*, or tipstiffs of the king's chamber. Others kept watch in the king's bed-chamber during the night, and were sworn to expose their lives for the safety of his person, whence they obtained the name of *archers de la garde*, which term was changed to *gardes du corps*, or body-guards.

Hulan. See UHLAN.

Hull, or Kingston-upon-Hull. A seaport town of England, in Yorkshire, situated on the great inlet of the Humber, at the point where it is entered by the river Hull. It is a very ancient town; during the civil war it declared for the Parliament, and sustained two severe sieges by the royalists.

Humaitá. A strong post on the river Paraguay, defended by a battery of 800 cannon, and believed to be impregnable by Lopez, the president of Paraguay; was forced by the Brazilian ironclads February 17, 1868. On the 19th, Caxias, the Brazilian general, stormed a work to the north of Humaitá, and captured many stores.

Hungary. A portion of the Austrian empire. It was a part of the ancient Pannonia and Dacia; was subjected to the Romans about 106, and retained by them till the 3d century, when it was seized by the Goths, who were expelled about 376 by the Huns, under Attila. After his death in 453, the Gepids, and in 500 the Lombards held the country. It was acquired by the Avars about 568, and retained by them till their destruction by Charlemagne in 799. About 890 the country was settled by a Scythian tribe, named Vingours, or Ungri (whence the German name *Ungarn*), and the Magyars of Finnish origin. The progress of the Magyars westward was checked by their defeat by the emperor Henry the Fowler, 934. After various changes of rulers it came permanently under the dominion of Austria in 1526. A revolution took place in Hungary in 1848 under the leadership of Kossuth.

Huns. The name of a considerable nation of antiquity, which from time to time made incursions on the Roman dominions, and which eventually, under Attila, the most renowned of its leaders, brought in the 5th century the Eastern and Western em-

pires to the verge of destruction. They were originally of Asiatic origin, and probably akin to the Scythians and Turks. In the latter part of the 4th century they settled along the Danube, in the territory abandoned by the Goths, and subsequently they pressed onward towards further conquests. In the 5th century they had acquired considerable power, but after Attila's death it was broken. Many of them afterwards took service with the Romans; others joined the invaders from the north and east that were attacking the moribund Roman empire.

Hunters, Death-. Followers of an army, who, after an engagement, look for dead bodies in order to strip them.

Hurdicea. Ramparts, scaffolds, fortifications, etc.

Hurdles. In fortification, twigs of willow or osiers, interwoven close together, and sustained by long stakes. They are made in the figure of a parallelogram, in length 5 or 6 feet, in breadth 3 or 3½. The closer they are wattled together the better. They serve to revet, or render batteries firm, or to consolidate the passage over muddy ditches; or to cover traverses and lodgments for the defense of the workmen against the fire-works. Hurdles are constructed in nearly the same manner as gabions, excepting that the pickets are placed in a straight line instead of a circle.

Hurkaru. A messenger; one who brings intelligence; a scout.

Hurl. To send whirling or whizzing through the air; to throw with violence; to drive with great force; as, to hurl a lance, etc.

Huron Indians (also called *Wyandots*). A tribe of aborigines now almost extinct, who were settled in Canada and in a part of the United States. They fought against the United States in the war of 1812-15.

Hurst. A charge in heraldry representing a small group of trees, generally borne upon a mount in base.

Hurter, or Heurtoir. A square beam placed at the foot of a parapet where there is an embrasure to prevent the wheels of the gun, when the latter is run up, from injuring the interior slope. A short fascine or military fagot is sometimes substituted for a beam. A hurter is placed on the front part of a siege platform, under the wheels. The motion of gun-carriages is checked, front and rear, by pieces of wood or iron bolted to the top rails called *hurters* and *counter-hurters*.

Hussar. A name given to the national cavalry of Hungary and Croatia. They were first raised in 1468, and received their name either from the method in which they were called out, or from the Tartar *uswar*, which signifies cavalry. In the armies of modern Europe hussars are light horse, and differ from light dragoons only in some peculiarities of dress and equipments.

Hussites. Is the name of the followers of Huss. Immediately after his martyrdom

they arose in Bohemia, and took a frightful revenge on the priests, monks, and prelates of the Roman Catholic Church. Wenceslaus succeeded, however, in appeasing the storm by granting them religious freedom. But when the king died in 1419, and the pope issued an order for the conversion of the Hussites by force, a civil war began. They assembled under the leadership of John Ziska, on Mount Tabor, captured Prague, pillaged and burnt the monasteries, and defeated at Deutchbrod in 1422, and in several other minor encounters, the troops of Sigismund, the German emperor and heir of Wenceslaus. Ziska died in 1424, but his successor, Procopius, a former monk, was still more successful. He defeated Sigismund at Miess and Tachau, and carried the war into Austria, Bavaria, Franconia, and Saxony. Meanwhile, the Hussites had separated into two parties, the Taborites and Calixtines. In the beginning they acted in perfect concert with each other. But in 1433 the Council of Basle succeeded in coming to an agreement with the Calixtines and in drawing them out of the contest; the result of which was that the Taborites were totally defeated at Bomishbrod in 1434. Toleration was granted, and Sigismund entered Prague, August 28, 1436. The Hussites opposed his successor, Albert of Austria, and called Casimir of Poland to the throne, but were defeated in 1438. A portion of the Hussites existed in the time of Luther, and were called "Bohemian Brethren."

Hut. Is a wooden structure, more or less rough in details, for the housing of troops. It is substituted very often for the tent, when the sojourn in a camp or cantonment is likely to be of consideration, as, for instance, through a winter,—a hut, however rude, which is wind- and water-tight, being as superior in comfort to a tent as the latter is to the open air. Huts may be made of almost any size, and are sometimes for one officer; at others for as many as 100 men. The quarters occupied by U. S. troops on the American frontiers are very frequently huts made by the troops.

Huy. A town of Belgium, 18 miles southwest from Liege. This town has withstood several sieges. Its fortifications were dismantled in 1718, but in 1815 its castle was rebuilt.

Hyccara (now *Muro di Carini*). A town of Sicily, on the north coast of Sicily, west of Panormus. It was taken by the Athenians and plundered, and its inhabitants sold as slaves, 415 B.C.

Hydaspes. A river in India, where Alexander the Great defeated Porus, after a severely contested engagement, in 327 B.C.

Hyder. The Arabic term for lion. This title is frequently given to men of rank in India.

Hydraulic Jack. A powerful portable apparatus for moving heavy weights through short distances, by an application of the principles of the hydrostatic press. There

are two forms, the *lifting*- and *pulling*-jack. Those used in the American military service are of 80 tons capacity.

Hydraulic Loading Apparatus. The apparatus used in manœuvring heavy turret-guns in the English navy, invented by Mr. George Rendel (a member of Sir William Armstrong's firm), and first tested in the working of a 38-ton gun on the "Thunderer." It was determined to similarly equip the "Inflexible," with her 80-ton armament. The apparatus was thoroughly tested, in working the 100-ton guns delivered to the Italian government, in experiments at Spezzia, 1876. The working of the gun, including all the operations of loading and sponging, is effected by means of hydraulic pumps, which are all operated by one small steam-engine. The gun is placed with its trunnions resting on two heavy blocks of metal, which, being retained by guides, slide on large beams or girders built in the floor of the turret. In front and rear of the blocks are pistons, working in cylinders in the direction of the floor-beams. These pistons, under the influence of water-pressure, move the gun in and out of battery. The breech is raised and lowered by similar means. When the gun and trunnion-blocks rush back under the impulse of the recoil from firing, the water in the rear cylinders is forced out through escape-valves, which are held down by springs under a tension of 50 atmospheres. The recoil is thus checked in the space of 3 or 4 feet. If a larger charge is used the tension of the springs can be increased. The springs only come into play in resisting the desperate force of recoil. The water pumped into the cylinders (a valve at the rear opening outwards being raised) is sufficient to run the gun forward without displacing the recoil-valves, the working-pressure required being less than 50 atmospheres.

When the gun is to be loaded, it is run forward and the muzzle depressed till it is in front of an armored hood, which shields an iron door in the main deck. The door slides back, a sponge appears on the end of a staff, which enters the bore and lengthens itself like a telescope till the bottom is reached, when, in obedience to the touch of a valve, a flood of water is ejected from the sponge to extinguish fire and wash the bore. The shot and cartridge next appear, lifted from below on a small truck, which is run out on a trap-door. The cartridge is lifted

in front of the muzzle, the sponge—now converted into a rammer—pushes it a short distance into the gun, is then withdrawn, and when the shot rises pushes both to the bottom of the bore. The sponge is then withdrawn below deck and the trap closes. Each of these movements is effected entirely by water-pressure, the course of the water and the corresponding operation being determined by manipulating the proper valve. The power is supplied by a small steam-engine specially designed for the purpose. When no manœuvre is to be performed, the engine occupies itself in pumping water from the tank against the recoil-valves. When the pressure rises above 50 atmospheres these valves allow a small quantity to escape, which runs back into the tank. The engine barely moves in this work. When any manœuvre is to be performed, such as running the gun forward, a handle is touched, the cylinder-valves open a passage to the water, and, the enormous resistance being removed, the engine rattles with energy, and the gun moves forward as by magic. The valve being closed by the operator, the engine returns to its sisyphæan labor of pumping water against the loaded valves till some new outlet gives it a specific task.

Every part of this apparatus, notwithstanding its provisional mounting, worked perfectly in the experiments at Spezzia.

The only defect in the principle was developed by the bursting of one, the 38-ton gun of the "Thunderer" (January 2, 1879), which was worked by this apparatus. The disaster has been generally attributed to the presence in the gun of a double charge of both shot and powder. This could hardly have occurred in hand-loading. Steps have been taken to remedy the apparatus in this regard.

Hygrometer. An instrument for measuring the degree of moisture of the atmosphere.

Hygrometer, Daniell's. A form of hygrometer consisting of a bent glass tube terminating in two bulbs, the one covered with muslin, the other of black glass, and containing ether and a thermometer. Ether being poured on the muslin, the black ball, cooled by the evaporation of the ether within, is soon covered with dew, at which moment the receding of the inclosed thermometer, compared with that of another in the air, gives the dew point.

I.

Iapydes. A warlike and barbarous people in the north of Illyricum, between the rivers Arsia and Tedanius; were a mixed race, partly Illyrian and partly Celtic, who tattooed their bodies. They were subdued by Augustus. Their country was called Iaiydia.

Iazyges. A powerful Sarmatian people, who originally dwelt on the coast of the Pontus Euxinus and the Palus Mæotis; but in the reign of Claudius settled near the Quadi in Dacia, in the country bounded by the Danube, the Theiss, and the Sarmatian Mountains. The Iazyges were in close alliance with the Quadi, along with whom they frequently attacked the Roman dominions, especially Mæsia and Pannonia. In the 5th century they were conquered by the Goths.

Ice. In high latitudes, during the winter, rivers are frequently covered with ice of sufficient thickness to sustain the heaviest loads. This means of communication should be used with great circumspection. A change of temperature may not only suddenly destroy this natural bridge, but render the river impassable by any method for a considerable time in consequence of the floating ice.

The thickness of ice should be, to allow the passage of infantry in single file on a line of planks, and 2 yards apart, 2 inches; cavalry or light guns, with intervals, 4 inches; 12-pounder field-pieces, unlimbered and on sleds, 5 inches; 12-pounder field-pieces, limbered and drawn by horses, with intervals between pieces, 6 to 7 inches. Ice when 10 to 12 inches thick bears the heaviest loads. Two tracks of planks laid on the ice for the carriage-wheels to run on, may be employed when there is any doubt as to its strength, or the wagon may be transformed into a sort of sled by fastening two planks under the wheels.

The thickness of the ice may be increased, when the temperature is low enough, by throwing water on it.

When the river is frozen on each side, but open in the middle in consequence of the velocity of the current, a boom stretched across the open space will often check the velocity sufficiently to cause the water to freeze.

Iceni. A British tribe which inhabited chiefly Suffolk and Norfolk. In 61, headed by Boadicea, their queen, they marched southwards and destroyed Verulam, London, and other places, with great slaughter of the Romans, but were defeated by Suetonius near London, and their queen slain.

Ich Dien. *I serve*; the motto under the plume of ostrich feathers found in the helmet of the king of Bohemia after he was slain at the battle of Crécy, at which he served as a volunteer in the French army, August 26, 1346. Edward the Black Prince, in veneration of his father, Edward III., who commanded that day, though the prince won the battle, adopted this motto, which has since been borne with the feathers by the heirs to the crown of England; but not as prince of Wales, which many have erroneously maintained.

Ichneæ, or Ischnæ. A Greek city in the north of Mesopotamia, founded by the Macedonians; was the scene of the first battle between Crassus and the Parthians, in which the former gained the victory. According to Appian, the Parthians soon after defeated the Romans near the same spot.

Ichonography. The plan or representation of the length and breadth of a fortification, the distinct parts of which are marked out either on the ground itself, or on paper. A plan upon the correct principles of ichonography represents a work as it would appear if it were leveled to its foundations, and shows only the expanse of ground on which it had been erected. The science does not represent either the elevation or the different parts belonging to a fortification. This properly comes under the title "profile," which does not, however, include length.

Iconium (now Konia). A town of Asia Minor, situated on the shores of the Lake Trogitis, about 120 miles inland from the Mediterranean. In ancient times it was famous as the capital of Lycaonia, and from 1087 to 1229 it was the seat of a Seljuk sultanate. In December, 1832, a battle was fought here, in which Ibrahim Pasha completely defeated the Turkish army.

Idaho. A Territory of the United States, bounded on the north by the British possessions, on the east by Montana and Dakota, and on the south by Nevada and Utah. It was organized in 1863, and has frequently been the scene of Indian troubles.

Idsted. A village of Selswick. A battle was fought here in 1850, between the Danes and Schleswig-Holsteiners, in which the latter were defeated.

Ignition (Lat. *ignis*, "fire"). The act of setting fire to, or of taking fire; as opposed to combustion or burning, which is a consequence of ignition. By ignition of gunpowder is understood the setting on fire of a particular point of the charge.

Ilerda (now Lerida). A town of the Iler-

getes, in Hispania Tarraconensis, situated on a height above the river Sicoris (now *Segre*). It was afterwards a Roman colony, but in the time of Ausonius had ceased to be a place of importance. It was here that Africanus and Petreius, the legates of Pompey, were defeated by Cæsar, 49 B.C.

Illinois. One of the Central States of the United States, in the valley of the Upper Mississippi, and one of the most fertile in the Union, having scarcely any soil which is uncultivable. It was originally settled by the French, but fell into the hands of the English in 1763, becoming the property of the United States at the Revolution. It was organized as a State December 3, 1818, and during the civil war was a staunch supporter of the Union.

Illinois Indians. A confederacy of Indian tribes, mostly of Algonkin stock, who formerly inhabited the State now known by their name. Very few relics of these tribes now exist.

Illustrious. Conferring lustre or honor; brilliant; renowned; as, illustrious deeds or titles.

Illyricum, or Illyria. Is the Roman name of a country whose limits in ancient times varied considerably. It was inhabited by a savage tribe, who were much addicted to piracy and robbery. In 359 B.C. Philip of Macedon conquered the eastern portion of the country, now Albania, and it was incorporated with Macedonia. The Illyrians were brought into a collision with the Romans on account of their piracy, which led to their subjugation about two centuries before the Christian era. They made numerous efforts to shake off the Roman yoke, but were always defeated, and the country became a most important province of the Roman empire, comprising the territory represented in modern times by Croatia, Dalmatia, Herzegovina, Montenegro, nearly all Bosnia, and a part of Albania. On the division of the Roman empire, it shared in the vicissitudes that followed that act. A decree of Napoleon, on October 14, 1809, gave the name of Illyrian provinces to Carniola, Dalmatia, and other countries from the Adriatic Sea to the Save, then belonging to the French empire. At his fall these provinces were united as a kingdom to the Austrian empire, and some alterations were made in its boundaries, especially by the restoration to Hungary of what had formerly belonged to it, and the annexation of the whole of Carinthia.

Ilmenau. A town of Saxe-Weimar, on the Ilm, 18 miles west from Weimar. A battle was fought by the united forces of the Russians and Saxons against the Swedes near this town in 1706.

Imbannered. Furnished with banners.

Imbellic. Not warlike or martial. This term is now obsolete.

Imbody. See EMBODY.

Imbrued, or Embrued. An expression used in heraldry to signify bloody, or drop-

ping with blood. Weapons thus blazoned are drawn with drops of blood falling from them.

Imeritia. Formerly an independent Transcaucasian territory, now part of the government of Kutais. Its history as an independent dominion commenced from about the beginning of the 15th century, and was long marked by internal dissensions. In 1745, Solomon I. was proclaimed, but his nobles revolting shortly after, and aided by the Turks, dethroned him. Solomon applied for help to Russia, and in 1769, Count Todtlen, at the head of a Russian force, entered Emeritia, restored the king, and drove back the Turks. The civil dissensions of this province, however, continued, and at last, in 1810, after having long acknowledged allegiance to Russia, it was formally incorporated in, and proclaimed a province of that empire.

Immailed. Wearing mail or armor; clad in armor. This term is now obsolete.

Immartial. Not martial; not warlike. This term is now obsolete.

Immortals. In antiquity, the name of a body of 10,000 troops, constituting the guard of the king of Persia; so called because they were always of the same number; for as soon as any of them died, the vacancy was immediately filled up. They were distinguished from all the other troops by the richness of their armor, and still more by their bravery. The same term was applied to the life-guards of the Roman emperors.

Imola. A fortified town of Ravenna, a province of Italy, on a small island in the river Santerno; it is defended by a strong castle. This town was founded by the Lombards on the ruins of Forum Corneli, destroyed by Justinian, and was afterwards successively held by different chiefs who ruled in Central Italy. Julius II. annexed it to the States of the Church, but it was delivered from the papal yoke when Ravenna declared for annexation to Sardinia in 1859.

Impact. In gunnery, the single instantaneous blow or stroke of a body in motion against another either in motion or at rest.

Impale. In heraldry, to arrange two coats of arms side by side in one shield divided per pale. It is usual thus to exhibit the conjoined coats of husband and wife, the husband's arms occupying the dexter, or right side, and the wife's the sinister, or left side, of the escutcheon.

Impedimenta. The accompaniments to an army received from the Romans the name of impedimenta. They consist in transportation of munitions, equipments, provisions, hospital supplies, tents, engineering tools, bridge equipage, and boats, baggage, cooking utensils, etc., necessary for the use of an army moving against an enemy. This requires the use of large numbers of wagons and of draught animals, or shipping, and necessarily impedes the movement of an army. See BAGGAGE.

Impenetrable. Incapable of being penetrated or pierced, not admitting the passage of other bodies, not to be entered; as, an impenetrable shield.

Imperator. An old Roman title signifying commander, which was applied to the rulers of provinces, consuls, pro-consuls, etc., or to anybody who had an *imperium* assigned him. After a victory the Roman soldiers frequently saluted their commander by this title.

Imperial Guards. See GUARDS, IMPERIAL.

Imperialists. This word was chiefly applied to the subjects of, or forces employed by the house of Austria, when opposed to the troops of other German powers.

Imperil. To bring into peril, to endanger.

Impetuous. Rushing with force and violence, moving with impetus, furious, forcible; as, the troops went pouring forward with impetuous speed.

Impetus. In gunnery, the altitude through which a heavy body must fall to acquire a velocity equal to that with which a ball is discharged from a piece.

Implement. Whatever may supply a want, especially an instrument or utensil as supplying a requisite to an end; as, the implements of war.

Implements, Equipments, and Machines. In artillery, the two former are employed in loading, pointing, and firing cannon, and in the mechanical manœuvres of artillery carriages, the latter to mount and dismount cannon from their carriages, and to transport artillery material from one part of a work to another. The implements for loading cannon are, (1) The *rammer-head*, a short cylindrical piece of beech or other tough wood, fixed to the end of a long stick of ash, called a *staff*, employed to push the charge to its place in the bore or chamber of a cannon. (2) The *sponge*, a *woolen* brush attached to the end of a staff, for the purpose of cleaning the interior of cannon and extinguishing any burning fragments of the cartridge that may remain after firing. In the field and mountain services, the rammer-head and sponge are attached to the opposite ends of the same shaft; in the siege and sea-coast services, they are attached to separate staves, except for howitzers, in which they are combined. (3) The *ladle*, a copper scoop attached to the end of a staff for the purpose of withdrawing the projectile of a loaded piece. (4) The *worm*, a species of double cork-screw attached to a staff, used in field and siege cannon to withdraw a cartridge. (5) The *gunner's haversack* (which see). (6) The *pass-box*, a wooden box closed with a lid and carried by a handle attached to one end. In siege and sea-coast service, where the cartridge is large, it takes the place of the haversack. (7) The *tube-pouch* or *primer-pouch*, a small leather pouch attached to the cannoner by a waistbelt. It contains the friction-tubes, lanyard, priming-wire, thumb-stall, etc. (8) The *budge-barrel*

(which see). (9) The *priming-wire*, used to pick a hole in a cartridge for the passage of the flame from the vent. (10) The *thumb-stall*, a buckskin cushion attached to the thumb or finger to close the vent in sponging and loading. (11) The *fuze-setter*, a brass drift for driving a wooden fuze into a shell. (12) The *fuze-mallet*, made of hard wood, and used in connection with the setter. (13) The *fuze-saw*, a 10-inch tenon saw for cutting wooden or paper fuzes to the required length. (14) The *fuze-gimlet*, sometimes employed in place of the saw to open a communication with the fuze composition. (15) The *fuze-auger*, an instrument for regulating the time of burning of a fuze by removing a certain portion of the composition from the exterior. For this purpose it has a movable graduated scale, which regulates the depth to which the auger should penetrate. (16) The *fuze-rasp*, a coarse file employed in fitting a fuze-plug to a shell. (17) The *fuze-plug reamer*, used to enlarge the cavity of a fuze-plug after it has been driven into a projectile, to enable it to receive a paper fuze. (18) The *shell-plug screw*, a wood screw with a handle, used to extract a plug from a fuze-hole. (19) The *fuze-extractor*, worked by a screw, and is a more powerful instrument than the preceding; it is used for extracting wooden fuzes from loaded shells. (20) The *fuze-wrench*, made in the form of a cross or T-shaped, to unscrew percussion fuzes. (21) The *mortar-scraper*, a slender piece of iron with a spoon at one end and a scraper at the other, for cleaning the chamber of a mortar. (22) The *gunner's sleeves*, made of flannel or serge; they are drawn over the coat-sleeves of the gunner to prevent them from being soiled while loading a mortar. (23) The *funnel*, made of copper, and used in pouring the bursting charge into a shell. (24) The *powder-measures*, made of copper, of cylindrical form, and of various sizes, for the purpose of determining the charges of shells and cannon by measurement. (25) The *lanyard*, a cord, one end of which has a small iron hook, and the other a wooden handle. It is used to explode the friction-tubes with which cannon for the land service are now fired. (26) The *gunner's gimlet* and *vent-punch*, used in boring out the vent when it becomes foul. (27) *Gunner's pin-cers* (which see). (28) The *shell-hooks*, an instrument made to fasten into the ears of a shell, for the purpose of lifting it to the muzzle of the piece. (29) The *tow-hook*, in field service, used in unpacking ammunition and taking projectiles from the chest. The implements for pointing are: the *gunner's level*, *gunner's quadrant*, the *breech-sight*, the *pendulum-hausse*, and *elevating arc*. (See appropriate headings.) The *tangent-scale*, a brass plate, the lower edge of which is cut to the curve of the base-ring of the piece, and the upper formed into offsets which correspond to differences of elevation of a quarter of a degree. It is used in pointing by placing the curved edge on the base-ring,

with the radius of the offset corresponding with the highest point of the ring, and sighting over the centre of the offset, and the highest point of the swell of the muzzle. The principal manœuvring implements are: the *trail handspike*, the *manœuvring handspike*, the *shod handspike*, the *truck handspike*, the *roller handspike* (see **HANDSPIKE**); the *prolonge*, a stout rope used to connect the lunette of the carriage and pintle-hook of the limber to move the piece short distances without limber; the *sponge-bucket*, made of sheet-iron, for washing the bore of the piece; the *tar-bucket*, also made of sheet-iron, for carrying grease for the wheels; the *watering bucket*, made of sole-leather, for watering the horses; the *water-buckets*, made of wood and bound with iron hoops. These are of two kinds,—one for the traveling-forge, and the other for the service of garrison batteries. The *drag-rope*, used when necessary to employ a number of men in hauling loads, or extricating a carriage from a difficult part of the road. It has a hook at one end, a loop at the other, and six wooden handles placed about 4 feet apart. The *men's harness*, similar to the drag-rope, except that the rope is stouter, and the handles are replaced by leather loops which pass over the shoulders of the men, to enable them to exert their strength to advantage. The *bill-hook*, or *hand-bill*, used for cutting twigs. The *screw-jack*, a lifting-machine composed of a screw worked by a *movable nut* supported on a *cast-iron stand*. It is used in greasing carriage-wheels. Artillery machines comprise the *gin* (see **GIN**), the *sling-cart* (see **HAND-SLING-CART**), the *casemate truck*, the *hand-cart* (see **HAND-CART**), the *lifting-jack*, and the *lever-jack*. The casemate truck is composed of a stout frame of wood mounted on three barrette traverse-wheels, and is employed to move cannon and carriages through posterns and along casemate galleries. The lifting-jack is a small but powerful screw, worked by a geared nut. It is useful when the space for manœuvring is small, and the number of men limited. If the weight to be raised is sufficiently high, the lifting power is applied at the top; if it be low, it is applied at the foot. The lever-jack is another but less powerful apparatus for lifting. It consists of a *lever* of wood resting on a *bolt*, which passes through holes in two *uprights*. The height of the bolt is varied by passing it through different holes in the uprights (eight in number), and the power of the lever is regulated by a notched piece of cast iron screwed to the under side of the lever.

Implements, Re-loading. See **RE-LOADING IMPLEMENTS**.

Impregnable. Not to be stormed, or taken by assault; incapable of being reduced by force; able successfully to resist attack; as, an impregnable fortress.

Impreguably. In an impregnable manner; in a manner to defy force; as, a place impreguably fortified.

Impress. To compel any person to serve. **Impression.** The effect of an attack upon any place or body of soldiers.

Imprisonment. Officers may be sentenced to imprisonment by a general court-martial in any case where the court may have discretionary authority. General, garrison, and regimental courts-martial may sentence soldiers to imprisonment, solitary or otherwise, with or without hard labor, for various offenses enumerated in the Articles of War. A garrison or regimental court-martial, in awarding imprisonment, is limited to a period not exceeding thirty days. When a court awards solitary imprisonment as a punishment, it is necessary that the words "solitary confinement" should be expressed in the sentence. The legal imprisonment in the United States is confinement, solitary confinement, and confinement on bread and water; confinement on bread and water shall not extend over fourteen days at a time, with intervals between the periods of such confinement not less than such periods, and not exceeding eighty-four days in any one year.

Impulse. The act of impelling, or driving onward with sudden force; impulsion; the action of a force so as to produce motion suddenly, or without appreciable loss of time. Also sudden motion exciting to action; hasty inclination; influence acting unexpectedly, or with momentary force; impression; instigation; as, the troops moved forward with one impulse.

In Battery. The position of field-guns when unlimbered and prepared for action. Also applied to heavy guns when in the firing position; also the command for the movement in both cases. Heavy guns are "from battery" when in the loading position.

In Gear. A command in the service of heavy guns, to cause the eccentrics of the truck-wheels to be thrown in gear. Also refers to the position of the eccentrics when the command is executed.

In Line. Refers to the formation of troops when posted, or marching, with extended front.

Inaccessible. A general term for any distance or height which cannot be approached for any military purposes.

Inactive. Not disposed to action or effort; not diligent or industrious; not busy; idle; as, an inactive officer.

Inca. A king or prince of Peru, before the conquest of that country by the Spaniards.

Incapable. A term of disgrace, frequently annexed to military sentences, when an officer has been cashiered by the sentence of a general court-martial, and rendered incapable of ever serving his country in either a civil or military capacity.

Incendiary Compositions. Used to set fire to buildings, shipping, etc., have been known and used from the earliest times. Greek fire (which see) was extensively used in the 7th century. Among modern incen-

diary compositions are *fire stone*, sometimes called *rock fire*, and *Valenciennes composition* (which see).

Incendiary Shells. Are shells containing incendiary compositions. See *CARCASS* for modern example.

Incensed, or Animé. An epithet applied in heraldry to panthers or other wild beasts borne with flames issuing from their mouth and ears.

Incidence, Angle of. In projectiles, the angle which the line of direction of the projectile makes with the surface of the obstacle on which it impinges.

Inclination. In gunnery, the inclination of a plane is the angle it makes with the horizon either above or below.

Inclination of the Grooves. In a rifle is the angle which the tangent to the groove at any point makes with the element of the bore passing through the point. The tangent of the angle, which may be taken as a measure of the inclination, is equal to the circumference of the bore divided by the length of bore corresponding to one revolution of the spiral. See *Twist*.

Incline. To gain ground to the flank, as well as to the front. Inclining is of great use in the marching of the line in front, to correct any irregularities that may happen. It is equivalent to the quarter facing and to the oblique marching of the infantry. It enables you to gain the enemy's flank without exposing your own, or without wheeling or altering the parallel front of the company.

Inclose. To surround; to shut in; to confine on all sides; to include; to shut up; to encompass; as, to inclose a fort or an army with troops; to inclose a town with walls.

Incommoder l'Ennemi (Fr.). To get possession of a fort, eminence, etc., from which the enemy may be harassed, or which is necessary to his security.

Incompetent. Incapable; unfit; unequal. No officer, be his situation what it may, can be said to be competent to command who is not only willing and able to follow orders himself, but will likewise see them strictly adhered to by others; whose mind is not superior to partialities, and whose judgment is not equal to discern real merit from ignorant assumption.

Incorporate, To. To add a smaller body of forces to a larger, and to mix them together. Independent companies are said to be incorporated, when they are distributed among different regiments; regiments among brigades, etc.

Incorporation. In the manufacture of gunpowder, is the thorough mixing of the three ingredients—nitre, sulphur, and charcoal,—a very important operation. The process should be so complete that the smallest particle of the gunpowder should contain each ingredient in proper proportion.

Increasing Twist. A term applied to rifle grooves, the inclination of which increases

from the breech to the muzzle. In many guns the grooves begin at the front of the chamber, without inclination.

Incursion. Invasion without conquest; inroad; ravage.

Indefensible. Not defensible; not capable of being defended or maintained; as, a military post may be indefensible.

Indefensive. Having no defense.

Indella. A body of Swedish yeomen furnished by certain proprietors of lands, after the manner of the old Norman feudal system.

Indemnification. A regulated allowance for losses sustained by officers or soldiers on actual service.

Indemnity. Indemnification, compensation, or remuneration for loss, damage, or injury sustained.

Indent, To. A word particularly made use of in India for the dispatch of military business. It is of the same import and meaning as *to draw upon*. It likewise means an order for military stores, arms, etc.; as, an indent for new supplies, etc.

Indented. In heraldry, one of the partition lines of the shield, similarly notched to dancetté, but with notches much smaller, and not limited in number.

Indented Line. In fortification, is a serrated line, forming several angles, so that one side defends another. The faces are longer than the flanks. Indented lines are used on the banks of rivers, where they enter a town. The parapet of the covered way is also often indented.

Independence, Declaration of. The solemn declaration of the Congress of the United States of America, on July 4, 1776, by which they formally renounced their subjection to the government of Great Britain.

Independent. In a military sense, is a term which distinguishes from the rest of the army those companies which have been raised by individuals for rank, and were afterwards drafted into corps that were short of their complement of men. *Independent company or troop*, is one that is not incorporated into any regiment.

India, or Hindostan. An extensive region of Southern Asia, celebrated during many ages for its riches and natural productions. The Hindoo histories ascribe the origin of the people to a period ages before the ordinary chronologies. A race of kings is mentioned as reigning 2800 B.C. Several ancient nations, particularly the Tyrians and Egyptians, carried on commerce with India. It was partially conquered by Darius Hystaspes, who formed an Indian satrapy, 512 B.C., and by Alexander, 327 B.C. The authentic history of Hindostan commences with the conquests of Mahmood Ghuzni, 1004. For further history of India, see *BENGAL*, *CALCUTTA*, *MADRAS*, etc.

Indian File. Single file; arrangement of persons in a row following one after another; the usual way among Indians of traversing woods, etc.

Indian Fortification. The entrance into an East Indian fortification is through a large and complicated pile of buildings, projecting in the form of a parallelogram from the main rampart; and, if the city has two walls, it projects beyond them both. This building consists of several continued terraces, which are of the same height as the main rampart, and communicate with it; the inward walls of these terraces form the sides of an intricate passage, about 20 feet broad, which leads by various short turnings, at right angles, through the whole pile to the principal gate that stands in the main rampart. This is the general outline of the old Indian fortifications.

Indian Military Force. The East Indian military service, like the civil service, has been undergoing a thorough reorganization, consequent on the great mutiny, and the transfer of the government of the country from the East India Company to the crown. In 1857, at the outbreak of the mutiny, the Indian army consisted of about 277,000 men, of whom 45,000 were Europeans and 232,000 natives. During the mutiny the native army of Bengal was almost entirely broken up. Fifteen regiments of regular native infantry, the local infantry, the Gurka and irregular line regiments, eight regiments of irregular cavalry, and the sappers and miners, were all that remained at the close of 1860 of the old native army of Bengal. The Indian army in 1867 numbered 188,148 men; 61,498 being Europeans, and 121,650 Indian forces. The police, civil and military, forms an important force, and is to a great extent taking the place of the regular army. In Bengal, for instance, the military police includes ten battalions of infantry, each 700 strong; three squadrons of cavalry, and some local levies; in all about 10,000 men, of various races, with 40 European officers. The whole police force of India has been reorganized on one uniform system, with a central organization of its own in each presidency.

Indian Territory. A large extent of territory, which originally belonged to the Louisiana purchase, lying north by west of that State. It was set apart for the use of Indians, many tribes of whom have from time to time been removed to it, and have wonderfully improved in the arts of civilized life.

Indiana. One of the Western States, and a portion of the great Mississippi Valley country. It was settled in the early part of the 18th century by the French; was subsequently ceded to the English, and after the Revolution passed into the possession of the United States. The early settlers were for a long time troubled by the incursions of the Indians; but after their signal defeat by Gen. Harrison at Tippecanoe, November 7, 1811, they were soon afterwards subdued, and became peaceable. Indiana was admitted as a State in 1816, and during the civil war contributed its full quota of troops to the support of the Union.

Indians. The name by which the various tribes of aborigines scattered over the extensive continent of America are distinguished. They are divided into numerous tribes and nations, all in a state more or less savage, and having all the peculiar characteristics of that kind of life. They generally decline as the civilized population advances into the country; though reservations of land have always been set apart by the U. S. government for the support of tribes within its territory. (See **INDIANS AND THEIR AGENCIES**.) A short description of the most important tribes will be found under appropriate headings in this work.

Indians and their Agencies. The following are the distribution and population of the Indians in the United States, taken from the Report of the Commissioner of Indian Affairs, 1876:

ARIZONA, Colorado River Agency: Mojaves, 820; Chemehuevis, 320; Hualapais (not on reservation), 620; Coahuilas (not on reservation), 150; Cocopas (not on reservation), 180. **Moquis Pueblo Agency:** Moquis Pueblos, 1700. **Pima and Maricopa Agency:** Papagos, about 5000; Pimas, 4100; Maricopas, 400. **San Carlos Agency:** Pinal and Aribaipa Apaches, 1051; Chiricahua Apaches, 297; Mojave Apaches, 618; Yuma Apaches, 352; Tonto Apaches, 629; Coyotero Apaches, 1612. Indians in Arizona not under an agent: Yumas, 980; Mojaves, 700.

CALIFORNIA, Hoopa Valley Agency: Hoopas, 511; Redwoods, 12; Sials, 13; Klamaths, 44. **Round Valley Agency** (192 not on reservation): Potter Valley, 307; Ukia, 197; Pitt River, 60; Red Wood, 94; Wy-lackie, 172; Con Cowe, 148; Little Lake, 166. **Tule River Agency:** Tules, Tejons, Wach-amnis, Kweahs, King's River, and Manaches, 1200. Indians in California not under an agent: Mission, Coahuila, Temecula, and other Indians, 4875; Klamaths, 1125.

COLORADO, Los Pinos Agency: Tabequache-Muache, Capote, and Weminuche bands of Utes, 2000. **White River Agency:** Grand River, Yampa, Uintah, and Pah bands of Utes, 900.

DAKOTA, Cheyenne River Agency: Two Kettle Sioux, Sans-Arc Sioux, Minneconjou Sioux, Blackfeet Sioux, 2280. **Crow Creek Agency:** Lower Yantconais Sioux, 1213. **Devil's Lake Agency:** Sisseton Sioux, 391; Wahpeton Sioux, 477; Cut-Head Sioux, 208. **Flandreau Agency:** Flandreau Sioux, 361. **Fort Berthold Agency:** Arickarees, 692; Gros Ventres, 414; Mandans, 241; Gros Ventres (seceders), 100. **Lower Brulé Agency:** Lower Brulé Sioux, 1800. **Ponca Agency:** Poncas, 730. **Red Cloud Agency:** Ogallalla Sioux, Northern Cheyennes, Northern Arapahoes, 6000. **Spotted Tail Agency:** Upper Brulé and Ogallalla Sioux, Lower Brulé Sioux, Northern Brulé Sioux, and others, 2815. **Sisseton Agency:** Sisseton and Wahpeton Sioux, 1745. **Standing Rock Agency:** Upper Yantconais Sioux, Lower Yantconais Sioux, Uncpapa Sioux,

Blackfeet Sioux, 2315. Yankton Agency: Yankton Sioux, 1992. Indians in Dakota not under an agent, or absent from agencies, 15,000.

IDAHO, Fort Hall Agency: Bannacks, 648; Shoshones, 964. **Lemhi Agency:** Sheepstealers, 800; Bannacks, 190; Shoshones, 450. **Nez Percés Agency:** Nez Percés, 2800. Indians in Idaho not under an agent: Cœur d'Alenes, Pend d'Oreilles, and Kootenays, 1000.

INDIAN TERRITORY, Cheyenne and Arapahoe Agency: Cheyennes, 2029; Arapahoes, 1708; Apaches, 48; Cheyennes absent from reservation, 180; held as prisoners by military, 82. **Kiowa and Comanche Agency:** Kiowas, 1090; Comanches, 1570; Apaches, 825. **Osage Agency:** Osage, 2679; Kaws, 443. **Pawnee Agency:** Pawnees, 2026. **Quapaw Agency:** Quapaws, 285; confederated Kaskaskias, Piankeshaws, Weas, Peorias, and Miamis, 202; Ottawas, 140; Eastern Shawnees, 97; Wyandottes, 258; Senecas, 240; Modocs, 117; Straggling Black Bob Shawnees and Pottawatomies, 100. **Sac and Fox Agency:** Sacs and Foxes of Mississippi, 417; absentee Shawnees, 647; Mexican Kickapoos, 812. **Union Agency:** Cherokees, 18,672; Creeks, 14,000; Choctaws, 16,000; Chickasaws, 5800; Seminole, 2558. **Wichita Agency:** Caddos and Delawares, 580; Comanches, 168; Keechies and Wacos, 155; Tawacanies, 100; Wichitas, 217. Indians in Indian Territory not under an agent: Citizen Pottawatomies, 181.

IOWA, Sac and Fox Agency: Sacs and Foxes, 341.

KANSAS, Kansas Agency: Pottawatomies (prairie band), 497; Kickapoos, 252. Indians in Kansas without an agency: Chippewas, of Swan Creek, and Munsees, 61; Mokohoko band of Sacs and Foxes, 200.

MICHIGAN, Mackinac Agency: Chippewas of Lake Superior, 1200; Chippewas of Saginaw, Swan Creek, and Black River, 2000; Chippewas and Ottawas of Lake Michigan, 7000; Pottawatomies of Huron, 60.

MINNESOTA, Leech Lake Agency: Pillager and Lake Winnebagoish Chippewas, 1610; Chippewas of Mississippi, 790. **Red Lake Agency:** Red Lake Chippewas, 1178. **White Earth Agency:** Mississippi Chippewas, 1768; Pembina Chippewas, 452; Otter-Tail Chippewas, 485.

MONTANA, Blackfeet Agency: Blackfeet, Bloods, and Piegiens (no tribal distinctions), 7200. **Crow Agency:** Mountain Crows, 1500; River Crows, 1000. **Flathead Agency:** Flatheads, 381; Pend d'Oreilles, 858; Kootenays, 390. **Fort Peck Agency:** Assiniboines, 1998; Yanktonais, Unepapa, Brulé, Teton Sioux, and Gros Ventres, 6500.

NEBRASKA, Great Nemaha Agency: Iowas, 224; Sacs and Foxes of Missouri, 100. **Omaha Agency:** Omahas, 1027. **Otoe Agency:** Otoes and Missouris, 454. **Santee Agency:** Santee Sioux, 793. **Winnebago Agency:** Winnebagoes, 1500.

NEW MEXICO, Abiquiu Agency: Utes, 900;

Jicarilla Apaches, 326. **Cimarron Agency:** Jicarilla Apaches, 420; Muache Utes, 280. **Mescalero Agency:** Mescalero Apaches, 1400. **Navajo Agency:** Navajoes, 11,868. **Pueblo Agency:** Pueblos, 8400. **Southern Apache Agency:** Gila Apaches, Mogollen Apaches, Mimbres Apaches, Chiricahua Apaches, 1600.

NEW YORK, New York Agency: Senecas, 3017; Oneidas, 250; Onondagas, 453; Cayugas, 161; Tuscaroras, 412; St. Regis, 741.

NEVADA, Nevada Agency: Pah-Utes on Pah-Ute reservation, 400; Pah-Utes in Northern Arizona (not on reservation), 284; Pah-Utes in Utah (not on reservation), 528; Pah-Utes in Southern Nevada (not on reservation), 681; Pah-Utes in California (not on reservation), 184; Pah-Utes on Pyramid Lake reserve, 1500; Shoshones, 500; Pah-Utes on Walker River reserve, 500. **Western Shoshone Agency:** Goship Utes (not on reservation), 204; Western Shoshones (not on reservation), 1945; Indians in Nevada not under an agent: Pah-Utes (not on reservation), 1000.

NORTH CAROLINA, Eastern Cherokee Agency: Eastern Cherokees, 1600; other Eastern Cherokees scattered through Georgia, South Carolina, and Tennessee, 800.

OREGON, Grand Ronde Agency: Moleles, Clackamas, Rogue River, and other bands, 755. **Klamath Agency:** Klamaths, 676; Modocs, 100; Pah-Ute Snakes, 100; Wollpahpe Snakes, 174. **Malheur Agency:** Pah-Utes, 462; Snakes, 300. **Siletz Agency:** Rogue River, Shasta Scoton, and thirteen other bands, 1100; Alseas, Sinselaws, Coosas, and Umpquas, 325. **Umatilla Agency:** Walla Walla, 128; Cayuse, 385; Umatilla, 169. **Warm Springs Agency:** Wascoes, 263; Teninoes, 50; Warm Springs, 187; Indians roaming on Columbia River, renegades and others, 2000.

UTAH, Uintah Valley Agency: Uintah Utes, 650; Indians in Utah not under an agent, Pah Vents, 184; Goship Utes, 256.

WASHINGTON TERRITORY, Colville Agency: Colvilles, 650; Spokanes, 685; Lakes, 242; Calispels, 395; Okinakanes, 380; San Poels and Nespeelums, 600; Methows, 315. **Neah Bay Agency:** Makahs, 588. **Puyallup Agency:** Muckleshoot, 180; Puyallups, 526; Nisquallies, 205; Squaxons, 50; Chehalis, 240; Shoal Water Bay, 60; Grape Harbor, 160; Cowlitz, 25. **Quinalt Agency:** Quinalt, 122; Queets, 114; Hohs, 80; Quilehutes, 260. **S'Kokomish Agency:** S'Klallams, 550; Towanas, 275. **Tulalip Agency:** Snohomish, 900; Lummi, 600; Etakmur, 550; Swinomish, 700; Muckleshoot, 500. **Yakama Agency:** Yakama, Palouse, Pisquose, Wenatshapum, Klittat, Klinquit, Kowwassayee, Siaywas, Skinpah, Wisham, Shyiks, Ochechole, Kahmiltpah, and Seapcat, 4100.

WISCONSIN, Green Bay Agency: Menomonees, 1522; Oneidas, 1387; Stockbridges, 121. **La Pointe Agency:** Chippewas, Red

Cliff Band, 726; Bad River, 782; Lac Court d'Oreille, 1048; Lac de Flambeau, 665; Fond du Lac, 404; Grand Portage, 262; Bois Fort, 714. Indians in Wisconsin not under an agent: Winnebagoes, 828; Pottawatomies (prairie band), 180.

WYOMING, *Shoshone Agency*: Shoshones (eastern band), 1800.

Indians in North Carolina, Indiana, Tennessee, Georgia, Florida, and Texas: Miamis, Seminoles, Lipans, Tonkawas, 850. Number of Indians in the United States, exclusive of those in Alaska, 266,151; number of Indians who are mixed-bloods, 40,639; number of school-teachers for Indians, 437; amount of money expended for education during the year, \$362,496.03; number of births and deaths about even.

ALASKA. The aboriginal inhabitants of Alaska are divided generally into two classes, the Ararian, or Coast tribes, and Indian, or Interior tribes; of the former the Innuits, or Esquimo races, inhabit coast of Arctic and North Pacific Ocean, and the Aleutians inhabited the chain of Aleutian Islands and the western ends of Aliaska peninsula.

Innuits, or Esquimo. Kópágmuts; numbered, in 1870, about 200; inhabit the shore of the Arctic Ocean between Mackenzie's River and Manning's Point; were formerly much more numerous and powerful, inhabiting valley of Mackenzie's River for 800 miles until driven out by Indians.

Kanmalágmuts. They number about 250; inhabit shore of Arctic Ocean from Manning's Point to Cape Barrow; great traders.

Nuwiágmuts. Number about 600, and inhabit coast of Arctic Ocean from mouth of Colville River to Cape Liskuroré; main villages at Cape Smith, Cape Barrow, Wainwright's Island, and Icy Cape; make annual trading voyages in July and August.

Nunatógmuts. Number about 350; inhabit, the north shore of Kotzebue Sound; treacherous and thieving; meet white traders annually at Point Hope, and carry on trade with natives up the inland rivers.

Konágmuts. Number about 100, and inhabit the eastern shore of Selanik River and southeast coast of Kotzebue Sound, carrying on trade with interior Indians.

Okeógmuts. Number about 350, and inhabit the islands in Behring's Sea and Straits north of N. lat. 63°; most agile and hardy of Northern Indians; are bold, obstinate, and courageous; carry on trade between Asia and America by means of skin canoes.

Kikhtogámuts. Number about 250, and inhabit St. Lawrence Island; the most immodest and filthy of Esquimos.

Kariágmuts. Number 500, and inhabit peninsula between Kotzebue and Norton Sounds, have large trade with whalers, and travel extensively; are addicted to theft, incest, and violence.

Mahlemut. Number 600; inhabit the neck of the Kariak peninsula.

Undálgmuts. Number 150, and inhabit southwestern shore of Norton Sound.

Ecbgmuts. Number about 1000; inhabit the delta of the Yukon and 300 miles of its valley. Have heavy beard and hairy bodies, in strong contrast to other tribes.

Mágemuts. Number about 600; inhabiting Muriak Island and coast from 60° to 62° N. lat. Great hunters of mink, as their name indicates. They excel in ivory carving, but are poor, filthy, and immodest.

Kuskogmuts. Number 2500; inhabit shore of Kuskokwina Bay and valley of Kuskokwina River for 150 miles; do not intermarry with other tribes.

Nushagágmuts. Number about 400, and inhabit shore of Bristol Bay and valleys of lakes between it and coast mountains.

Ogulgimuts. Number about 500, and inhabit north shore of Aliaska peninsula and basin of Lliamna Lake.

Karrigmuts. Number 3000, and inhabit south shore of Aliaska peninsula and shore of Cook's Inlet to Lliamna Peak, and also Kodiak Island; were formerly much more numerous, and occupied all the shore of Cook's Inlet until the interior Indians drove them off and established themselves on that coast; they are frequently confounded with the *Aleuts*; have been much altered by over 90 years' intercourse with Russians; are virtually Greek Christians.

Chugachigmuts. Number about 600, and inhabit southern and eastern coast of Kenai peninsula.

Ugálákmuts. Number about 400, and inhabit coast from Icy Bay to Prince William's Sound, except at the mouth of the Atna, on Copper River, where the interior Indians hold the coast. This tribe is at present the southern and eastern limit of the Innuits, or Esquimo races, although at one time they undoubtedly extended to the mouth of the Stickeen River.

Aleuts. On the advent of the Russians, about 150 years ago, the twenty Aleut races numbered about 10,000 people; they had marked peculiarities and well-defined tribal divisions. The cruelty, oppression, and persecution of the Russians rapidly decreased their numbers; their natural and tribal distinctions were lost and forgotten; they were entirely cowed and subdued; they embraced Greek Christianity, and were transported by their conquerors all along the coast.

Khagántagákuhn. Number 350, and inhabit western end of Aliaska peninsula and Shumagin Islands.

Unaláshkuhns. Number 750; inhabit Unalask, Unmak, and Priboloff Islands.

Atkanhun. Number 470, and inhabit the Western Islands.

Tinneh. Interior Indian tribes belonging to the same family; occupy either flank of the Rocky Mountains, from the mouth of Mackenzie's River southward as far as Mexico. In Alaska they extend westward to near the delta Yukon, but absolutely reach the sea-coast only at two places, the mouth of the Atna River and the shore at Cook's Inlet.

Koyukukhotana. Number about 600, and inhabit the mountain north of the Yukon and east of Norton Sound. A fierce and warlike tribe, constantly at war with the Kaigukhotima; live in permanent villages, and travel by dog-sledges. They subsist by hunting deer and mountain-sheep.

Kaigukhotima. Number about 2800; have many settlements between lat. 60° and 65° N. and long. 150° and 160° W., on the lower Yukon and Kuskokwim Rivers. They live by fishing and trading dried fish with the tribes of the upper rivers for moose and deer meat, wooden-ware, and beech-bark canoes, which the latter are very skillful in making; they travel by dog-sledges.

Unakhotana. Number about 500, and live in the valley of the Yukon from long. 152° to 156° W.; do not build permanent villages, keep only hunting-dogs, practice polygamy, take and discard wives at pleasure.

Ahtona. Number about 1500, and inhabit the basin of the Atna, or Copper River. This is one of the two tribes that have forced their way through the Ararians and conduct their annual trading independent of the middlemen of the coast.

Tchaninkutchin. Number about 1000, and inhabit north shore of Kenai peninsula and basin of Suchinto River. This is the second instance of interior Indians proper who have forced their way through the Ararians. Less is known of them than any other coast tribes; they are intelligent and warlike, and subsist on mountain-sheep, with the skins of which they clothe themselves.

Nehannees. A name given to a number of tribes who inhabit the head-waters of the Yukon, Mackenzie, and Stickeen Rivers. By the late George Gibbs, they are of a low grade and little is known of their peculiarities or numbers. They consist of the *Abbato-tena*, who inhabit the basin of the Pelly and MacMillan Rivers, and are called by the Hudson Bay people "Gens du Bois." The *Mauvais Mondis*, inhabiting basin of Francis Lake. *Architotena*, called Sicannees by the Hudson Bay people, inhabit the head-waters of the Deas and Laird's Rivers. The *Dahotena*, inhabiting the head-waters of the Stickeen, and the *Iahko-tena*, in the basin of the Lewis River.

Chilkahtena. Inhabit head-waters of rivers that rise near the head-waters of the Chilkut that flow north into the Yukon. They are bold and warlike; number about 500; are middlemen traders between the Chilkut and Ihlinkets, who do not allow them to descend the Chilkut, and interior tribes.

Jnahnkutchin. Number about 800, and live in basin of Jenanah River, the principal tributary of the Yukon, are nomadic, live on deer, and trap fox and sable for trade; are regarded by their neighbors, whom they visit annually for trading purposes, with fear and terror.

Kutchkutchin. Number about 400, and inhabit about 850 miles of the Yukon valley.

Natsitkutchin. The "Gens de Rats" of

the Hudson Bay people; occupy the north side of the Porcupine; number not known.

Inkuthkutchin. 250 in number; inhabit south bank of Porcupine.

Hankutchin. Number not known; occupy 800 miles of Yukon valley that is densely wooded.

Intchuon Kutchin. Very numerous, "the Gens de Foix" of the Hudson Bay people; occupy the basin of the White, the Lewis, and the Stewart River; they are of nomadic habits, amiable and remarkably honest. They trade with the Atna River Indians.

Ihlinkets. A stock of Indians inhabiting the islands of the Alexander Archipelago from lat. 60° N. to the head or north end of Vancouver Island. They are essentially maritime and commercial; they travel entirely by canoes, in which they make voyages hundreds of miles in length. They live in fixed villages, always built upon the shores of bays or rivers in the most substantial manner of heavy timber, often showing great mechanical skill, and frequently arranged with regard for capacity for defense. They own slaves, cremate their dead, and are industrious and frugal as well as cruel, warlike, and aggressive in their nature.

Yakutats. Numbering about 850; inhabit the coast from Mount St. Elias to Mount Crillon, their principal village being at Port Mulgrove, Behring's Bay. They cure salmon to live upon, hunt the seal and sea-otter for trade. They eat the blubber and flesh of the whale, and often voyage as far south as Fort Simpson, in lat. 54° N.

Chilkahtknan. Number about 1500 in the village of Chilkah and Iselkort Rivers and head of Lyn Channel; they are fierce and warlike, often at war with the southern Indians; make annual trading voyages, carrying peltries obtained from interior Indians as far south as Victoria, Vancouver Island, receiving in exchange blankets, powder, ball, hardware, and molasses and sugar.

Sitkakneen. Number about 1200 or 1500, and inhabit the shore of Cross Sound, Cheekayoff, Kruyoff, and Buranoff Islands. Their principal village is Sitka, Buranoff Island. They are called Kolases by Russians, whom it took many years to subdue to a sufficient extent to make a foothold in their country. They frequently fought the intruders, and as late as 1855 perpetrated a bloody massacre, killing a whole congregation who were worshipping in a church. Before the advent of the Russians they were often at war with their neighbors, and before being subject to an epidemic of smallpox and a massacre by the Stickeens were much more numerous. The Russians employ large numbers of them at ship-building. They are industrious and have much mechanical skill in working both wood and metals. Large numbers of them have been baptized into the Greek Church, but Christianity never made much impression upon them.

Kootzmonknan. Numbering about 800; inhabit Admiralty Island, their principal vil-

lage being at Hood's Bay. They resemble the Sitkas, with whom they intermarry. They were the first to distill a kind of liquor from molasses or sugar and potatoes or beans, which is now a universal custom in Alaska, and is demoralizing the native population to a great extent.

Jahkuknan. Numbering about 250 in the basin of the Jashku River and shore of Stephen's Pass; resemble the Sitkas.

Kakenan. Number about 200; inhabit Kow and several other islands in Stephen's Pass; warlike and treacherous. They are the only Alaska Indians with whom the United States has had hostilities. Gen. J. C. Davis destroyed their principal village in 1858, since which time they have declined in power and importance.

Tongasknan. 200 in number; inhabit Tongas Island.

Stakhinknan. Number 1000; inhabit the mouth of Stahkin River and neighboring islands; principal village at Wrangle Island; resemble the Sitkas closely; warlike and treacherous; skillful workers in metals and wood.

Kygahn. Called Haidas by Hudson Bay people; numbering in Alaska about 500 and in Prince of Wales Archipelago; are of fine stature, and fierce and warlike as well as treacherous; ingenious carvers in metal and wood; they formerly carried on a trade in slaves with more northern Indians, making for the purpose of capturing them predatory incursions as far south as Vancouver Island and Puget Sound. They also manufacture and supply yellow-cedar canoes of immense size to northern Indians.

Indications, Military. See MILITARY INDICATIONS.

Indicator. An invention of Gen. Win-gate, of the New York Militia, for instructing men in aiming the musket. A steel rod passing through a brass tompon in the muzzle is projected forwards by the firing-pin. The rod carries a sharp point in the line of the sights, which punctures a miniature target a foot or so in front of the muzzle.

Indisciplinable. Not disciplinable; incapable of being disciplined, or subjected to discipline; undisciplinable.

Indiscipline. Want of discipline or instruction.

Indore. The capital of the principality of the same name in India, on the left bank of the Kuthi. This place, mean and insignificant enough in itself, acquired considerable notoriety in connection with the grand revolt of 1857. Though Holkar, the rajah, remained faithful to the British government, yet his troops mutinied on July 1, holding their prince as a prisoner in his palace, and butchering many Europeans, men, women, and children, in cold blood.

Inefficient. Incapable of, or indisposed to, effective action; effecting nothing; as, an inefficient force.

Inergetic. Having no energy; as, an inergetic officer.

Inescutcheon. In heraldry, a small escutcheon borne within a shield.

Inexperienced. Not having experience; unskilled; as, an inexperienced general.

Inexpugnable. Incapable of being subdued by force; impregnable.

Infamous Behavior. In the British service a term peculiarly applicable to military life when it is affected by dishonorable conduct; on conviction of which, an officer is ordered to be cashiered. Infamy may be attached to an officer or soldier in a variety of ways; and some countries are more tenacious than others on this head. Among European nations it has always been deemed infamous and disgraceful to abandon the field of action or to desert the colors. In Germany a mark of infamy was attached to the character of every man who was found guilty of misbehavior before the enemy. Among the Romans it was considered as infamous and disgraceful to be taken prisoner, and a Roman soldier was impressed with the idea that he must either conquer or die on the field. There are various occasions in which the conduct of an officer may render him unworthy of the situation he fills, such as cheating at play, taking unfair advantages of youth, imposing upon the credulity or confidence of a tradesman, habitual drunkenness, flagrant breaches of hospitality, etc.

Infantry (Lat. *infans*, "child," or "servant," applied to servants who went on foot, and *infanterie*, to foot-soldiers generally). Is that portion of a military establishment using small-arms and equipped for marching and fighting on foot, in contradistinction to artillery and cavalry. It is the oldest of the "three arms" into which armies are conventionally divided; was the favorite of the Greeks, the Gauls, the Germans, and the Franks, and was that mainly with which Rome conquered the world. Under Grecian and Roman civilization it attained pre-eminence as the *arm of battle*, but fell into contempt and comparative desuetude early in the Middle Ages, and did not emerge from that obscurity till the decline of the feudal system. It was first revived by the Swiss, who, armed with the pike, withstood the most famous chivalry of Europe. Afterwards the Spanish infantry, armed with the musket, and led by Alva and the Duke of Parma, Cortez and Pizarro, became the terror of two continents. The other states of Europe were not slow in learning the lesson. Infantry steadily increased in power and importance from the first years of the 14th century, and is now recognized as constituting the principal strength of military organizations. This importance results from the fact that it can be used everywhere, "in mountains or on plains, in woody or open countries, in cities or in fields, on rivers or at sea, in the redoubt or in the attack on the breach." It is the self-sustaining arm in the field of battle, and is, moreover, less expensive, man for man, than its auxiliaries.

Infantry Exercise. The use of the rifle, and manœuvres for regiments of infantry, according to the regulations issued by the War Department.

Infantry, Heavy-armed. Among the ancients were such as wore a complete suit of armor, and engaged with broad shields and long spears. They were the flower and strength of the Grecian armies, and had the highest rank of military honor.

Infantry, Light. Came into use after the year 1656. They had no camp equipage to carry, and their arms and accoutrements were much lighter than the common infantry, or battalion men; they were used as skirmishers, etc.

Infantry, Light-armed. Among the ancients, were designed for skirmishes, and for fighting at a distance. Their weapons were arrows, darts, or slings.

Infantry Tactics. See TACTICS.

Inferior. In a military sense means simply junior in rank, having a lower rank.

Infest. To trouble greatly; to disturb; to annoy; to harass; as, the sea is infested with pirates; parties of the enemy infest the coast.

Infile. To arrange in a file or rank; to place in order. This term is obsolete.

Inflammation. When grains of powder are united to form a charge, and fire is communicated to one of them, the heated and expansive gases evolved insinuate themselves into the interstices of the charge, envelop the grains, and ignite them, one after the other. This propagation of ignition is called *inflammation*, and its velocity the *velocity of inflammation*. It is much greater than that of combustion, and it should not be confounded with it. The *velocity of inflammation* of powder compressed by pounding is about .64 inch, while that of mealed powder in the same condition is only .45 inch. Inflammation, in the study of gunpowder, is the spread of the flame from one grain to another—as opposed to ignition; the setting on fire of a certain point of the charge.

Informant. In case a civil person is the complainant, he becomes the principal witness before a court-martial, and after giving his evidence may remain in court, in order that the judge-advocate may refer to him.

Informers. In the British service, were soldiers who gave information of false musters, or of pay illegally detained; and were, for said services, entitled to their discharge.

Ingauni. A Ligurian tribe who formerly inhabited the sea-coast and adjoining mountains at the foot of the Maritime Alps, on the west side of the Gulf of Genoa. They are mentioned as being engaged in hostilities with a neighboring tribe, the Epanterii, on the occasion of the landing of Mago, the brother of Hannibal, B.C. 206. They were several times engaged in wars with the Romans, but were finally defeated by the pro-consul, Æmilius Paullus, in a deci-

sive engagement (losing 15,000 killed and 2500 prisoners), which resulted in their ultimate submission to the Roman sway.

Inglorious. Shameful; disgraceful; ignominious; as, he charged his troops with inglorious flight.

Inimical. Hostile.

Initial Velocity. In England the term *muzzle velocity* is frequently used. In gunnery, the initial velocity of a projectile is the velocity at the muzzle of the piece, and is determined by the use of the ballistic pendulum, the gun pendulum, the electro-ballistic machines, the Schultz chronoscope, or the Le Boulengé chronograph; the two last being now generally used in the U. S. service. The various plans in use differ only in the manner of recording and keeping the time of flight. The initial velocity of a shot may be ascertained by firing the gun, the axis being horizontal, at a target and measuring the *distance* of the point struck below the point where the axis of the gun produced would pierce the target. This is the vertical distance fallen through by the ball in the time of passage from the muzzle to the target, and the time in which it falls through this distance is given by the formula

$$t = \sqrt{\frac{2s}{g}}$$

in which *t* represents the time, *s* the vertical space fallen through, and *g* the force of gravity. The distance to the target divided by this time gives the initial velocity approximately. Practically, this method is only applicable to large breech-loading cannon, which have neither windage nor vibration in the barrel to affect the angle of departure of the projectile. Smooth-bores or muzzle-loading rifles are subject to the first cause of error; the first-named guns in a great degree, and small-arms to vibrations not yet fully investigated, which cause a sensible difference between the axis of the piece as pointed and the line of fire. The causes that affect initial velocity are the weight of the charge, the size and position of the vent, the windage, the length of the bore, the form of the chamber, the diameter and density of the projectile, the windage of the cartridge; the form, size, density, and dryness of the grains of powder; and the barometric, thermometric, and hygrometric states of the atmosphere. See VELOCITY.

Injuries to Cannon. Brass cannon are little subject to external injury caused by service, except from the bending of the trunnions sometimes, after long service or heavy charges. Internal injuries are caused by the action of the elastic fluids developed in the combustion of the powder, or by the action of the shot in passing out of the bore. These effects generally increase with the caliber of the piece. The principal injury of the first kind is the cutting away of the

metal of the upper surface of the bore over the seat of the shot. The injuries of the second kind are, the *lodgment of the shot*,—a compression of the metal on the lower side of the bore, at the seat of the shot, which is caused by the pressure of the gas in escaping over the top of the shot. There is a corresponding *burr* in front of the lodgment, and the motion therefore given to the shot causes it to strike alternately on the top and bottom of the bore, producing other *enlargements*, generally *three* in number, the first on the upper side a little in advance of the trunnions, the second on the lower side about the astragal, the third in the upper part of the muzzle. It is chiefly from this cause that brass guns become unserviceable. *Scratches*, caused by the fragments of a broken shot, or the roughness of an imperfect one. A piece is said to be *honeycombed* when the surface of the bore is full of small holes and cavities. This is due to the melting and volatilization of a portion of tin in the alloy, tin being much more fusible than copper. Iron cannon are subject to the above defects in a less degree than brass, except the corrosion of the metal, by which the vent is rendered unserviceable from enlargement. The one cause of injury to iron cannon is the rusting of the metal, producing a roughness and enlargement of the bore and an increase of any cavities or honeycombs which may exist in the metal.

Iron cannon, however, are subject to a peculiar erosion by the gases, which Prof. Horsford explains by supposing that under the enormous tension and heat the sulphur in the gases unites with the iron, producing a friable sulphide of iron, which is successively formed and swept off by the gases. Wrought-iron guns are peculiarly subject to this erosion, cast-iron and steel less so. The amount of erosion is dependent upon the velocity with which the gases pass over the surface of the bore. In rifed wrought-iron guns having windage this action is fully illustrated, and the gun is soon disabled. The strong preference in many countries for steel as a bore lining is thus explained. By the use of expanding projectiles this action is largely prevented, the sabot acting as a gas-check. This system of projectiles is rapidly gaining favor for this and other reasons.

Inkerman. A small Tartar village in the Crimea, situated near the eastern extremity of the harbor of Sebastopol. It was once a celebrated city, and has numerous caverns cut in the rock, supposed to be the work of the monks in the Middle Ages. Near this place, November 5, 1854, was fought a battle between the allied English and French forces on the one side, and the Russians on the other, the former amounting to 25,000 or 30,000, the latter about 60,000. The Russians began the attack at dawn of day upon the intrenched lines of the English; but after a fierce and sanguinary contest of many hours, inflicting great loss on both sides, the Russians were finally driven from the field.

Inlist. See ENLISTMENT.

Inlying Picket. A body of infantry or cavalry in campaign, detailed to march, if called upon, and held ready for that purpose in camp or quarters.

Inner. One of the circular rings on the Creedmoor target; a shot striking in this space counts three.

Inniskilliners, or Enniskilliners. In the British service, the officers and soldiers of the 6th Dragoons and the 27th Foot are so called, from the two regiments having been originally raised at Enniskillen (or Inniskillen), a town of Ulster, where the inhabitants distinguished themselves in favor of King William against James II.

Innuity. A name given by some ethnologists to the Indian races inhabiting the northwestern coast of North America. They differ in many respects from the Indians of the interior and farther south. The Aleuts and Esquimos are not included in the term.

Inofficial. Not official; not proceeding from the proper officer; not clothed with the usual forms of authority, or not done in an official character; not required by or appropriate to the duties of any office; as, inofficial intelligence.

Inquiry, Board of. A term used in contradistinction to a court-martial, to signify the meeting of a certain number of officers (who are not sworn) for the purpose of ascertaining facts that may afterwards become a matter of investigation on oath. There are also courts of inquiry; such courts in the armies of Europe, it would seem, derived their origin from the prerogative of the sovereign, and became part of the military judicature by custom and not by express law. From this fact it has been considered that the exercise of this authority, instead of being regarded as an assumption of power, is a favor to the accused, and it is thus stated by Capt. Simmons in his work on courts-martial. For the army of the United States, courts of inquiry have been specially authorized by legal enactment. (See APPENDIX, ARTICLES OF WAR, 115 to 121.) The origin and purposes of such courts would naturally lead to the conclusion that they are of the essence of high command; and therefore the right to convoke them, under all the legal restrictions, is properly confined to the President of the United States, a general commanding an army, or a colonel commanding a department; and in the cases of enlisted men, the commanding officer of the regiment. See COURT OF INQUIRY.

Inroad. The entrance of an enemy into a country with purposes of hostility; a sudden or desultory incursion or invasion; attack; encroachment.

Inroll. See ENROLL.

Inscored. In the military art, when any part of an army has fortified itself with a sconce, or small work, in order to defend some pass, etc., it is said to be inscored. See ENSCONCE.

Inscribe. To mark with letters, characters, or words, as, to inscribe the name of the battle on their colors.

Insecure. Not effectually guarded or protected; unsafe; exposed to danger or loss.

Inspect. To view and examine officially; as, troops, arms, etc.

Inspection. A strict examination; a close survey. It is of various kinds, and embraces general, regimental, and troop or company duties. A general inspection is made from time to time by inspectors-general designated by the commanding generals of military divisions or departments. Every regiment on this occasion is minutely looked into, and a faithful account is delivered by each commanding officer of the actual state of his regiment. The interior economy of the corps is not only investigated, but the discipline of the men is likewise examined.

Inspection of Cannon, Instruments for. These are used to verify the dimensions of cannon, and to detect the presence and measure the size of cavities in the metal. The *star-gauge* is an instrument for measuring the diameter of the bore at any point. The *cylinder-staff* is used to measure the length of the bore. It is supported by a rest of a T-form at the muzzle, and the extremity inserted in the gun is armed with a *measuring-point* and a *guide-plate*. The *cylinder-gauge* is a cylinder of cast iron, turned to the exact or true diameter of the bore. When used it is attached to the end of the cylinder-staff. The *searcher* consists of four flat springs turned up at the end, and attached to a socket which is screwed on to the end of the cylinder-staff. It is used to feel for cavities in the surface of the bore. The *trunnion-gauge* verifies the diameters of the trunnions and rimbases. The *trunnion-square* is used to verify the position of the trunnions with regard to the bore. The *trunnion-rule* measures the distance of the trunnions from the rear of the base-ring. *Calipers*, for measuring exterior diameters. A *standard-rule*, for verifying other instruments. The *vent-gauges* are two pointed pieces of steel wire, 0.005 inch greater and less than the true diameter of the vent, to verify its size. The *vent-searcher* is a hooked wire, used to detect cavities in the vent. A *rammer-head*, shaped to the form of the bottom of the bore, and furnished with a staff, is used to ascertain the interior position of the vent. A *wooden rule*, to measure exterior lengths. A *mirror*, a *wax taper*, *beeswax*; *rammer*, *sponge*, and *priming-wire*. *Figure* and *letter-stamps*, to affix the required marks. The objects of inspecting cannon are to verify their dimensions, particularly those which affect the accuracy of the fire, and the relation of the piece to its carriage, and to detect any defects of metal and workmanship that would be likely to impair their strength and endurance.

Inspection of Projectiles. The principal points to be observed in inspecting shot and

shells are, to see that they are of proper size in all their parts; that they are made of suitable metal; and that they have no defects, concealed or otherwise, which will endanger their use or impair the accuracy of their fire.

Inspection of Shot.—The instruments are one *large* and one *small gauge*, and one *cylinder-gauge*; the cylinder-gauge has the same diameter as the large gauge; it is made of cast iron, and is 5 calibers long. There are also, one *hammer* with a conical point, six *steel punches*, and one *searcher* made of wire. The shot should be inspected before they become rusty; after being well cleaned each shot is placed on a table and examined by the eye, to see that its surface is smooth and that the metal is sound and free from seams, flaws, and blisters. If cavities or small holes appear on the surface, strike the point of the hammer or punch into them, and ascertain their depth with the searcher; if the depth of the cavity exceeds 0.2 inch, the shot is rejected; and also if it appears that an attempt has been made to conceal such defects by filling them up with nails, cement, etc. The shot must pass in every direction through the large gauge, and not at all through the small one; the founder should endeavor to bring the shot up as near as possible to the *large gauge*, or to the true diameter. After having been thus examined the shot are passed through the *cylinder-gauge*, which is placed in an inclined position, and turned from time to time to prevent its being worn into furrows; *shot* which *slide* or *stick* in the cylinder are rejected. Shot are proved by dropping them from a height of 20 feet on a block of iron, or rolling them down an inclined plane of that height against another shot at the bottom of the plane. The average weight of the shot is deduced from that of three parcels of 20 to 50 each, taken indiscriminately from the pile; some of those which appear to be the smallest should also be weighed, and they are rejected if they fall short of the weight expressed by their caliber more than *one-thirty-second* part. They almost invariably exceed that weight.

Inspection of Grape- and Canister-shot.—The dimensions are verified by means of a large and small gauge attached to the same handle. The surface of the shot should be smooth and free from seams.

Inspection of Hollow Projectiles.—The inspecting instruments are a *large* and *small gauge* for each caliber, and a *cylinder-gauge* for shells of 8 inches and under. *Calipers* for measuring the thickness of shells at the sides. *Calipers* to measure the thickness at the bottom. *Gauges* to verify the dimensions of the fuze-hole and the thickness of the metal at the fuze-hole. A *pair of hand-bellows*; a *wooden plug* to fit the fuze-hole, and bored through to fit the nozzle of the bellows. A *hammer*, a *searcher*, a *cold chisel*, *steel punches*.

Inspection.—The surface of the shell and

its exterior dimensions are examined as in the case of shot. The shell is next struck with the hammer, to judge by the sound whether it is free from cracks; the position and dimensions of the ears are verified; the thickness of the metal is then measured at several points on the great circle perpendicular to the axis of the fuze-hole. The diameter of the fuze-hole, which should be accurately reamed, is then verified, and the soundness of the metal about the inside of the hole is ascertained by inserting the finger. The shell is now placed on a trivet, in a tub containing water deep enough to cover it nearly to the fuze-hole; the bellows and plug are inserted into the fuze-hole, and the air forced into the shell; if there be any holes in the shell, the air will rise in bubbles through the water. This test gives another indication of the soundness of the metal, as the parts containing cavities will dry more slowly than other parts. The mean weight of shells is ascertained in the same manner as that of shot. Shot and shells rejected in the inspection are marked with an X made with a cold chisel,—on shot near the gate, and on shells near the fuze-hole.

Inspector-General. A staff-officer of an army, whose duties are those of inspection, and embrace everything relative to organization, recruiting, discharge, administration, accountability for money and property, instruction, police, and discipline. In the French army, a certain number of general officers are annually designated to make inspections.

Inspector-General of the Cavalry. In the British service, a general officer whose particular duty is to inspect all cavalry regiments, to report the state of the horses, and to receive specific accounts from the different corps of their actual state. He communicates directly and confidentially with the commander-in-chief. Inspector-general of the recruiting service is an officer of rank, through whom the field-officers of districts, and colonels of regiments (when they personally manage the recruiting service of their own corps), transmit their several returns to the adjutant-general's office.

Inspector-General's Department. In the United States, the law provides for one inspector-general, with the rank of brigadier-general; two inspectors-general, with the rank of lieutenant-colonel; and two with the rank of major. Also, that the Secretary of War may, in addition, detail officers of the line, not to exceed four, to act as inspectors-general.

Installation. The act of investing any one with a military order.

Instruction. The education or training of soldiers in military duties. In the U. S. service the colonel has general charge of the instruction of his regiment.

Instructions. Military directions or orders.

Instruments, Military Musical. The instruments which are peculiar to the cavalry

of most nations are the trumpet and bugle. In France, dragoon regiments in general formerly adopted the drum in common with the infantry; they now use the trumpet for garrison, and the bugle for field service. A certain number of fliers are likewise allowed in foot regiments. In the U. S. army, the drum, fife, and bugle are used by foot, and the trumpet by mounted troops. There is allowed a band of musicians to each regiment, which usually serve at regimental headquarters, and is partly maintained by the regimental fund. (See **FUND**.) There is also a band employed at the West Point Military Academy, which is maintained by the government. In the U. S. navy there is a band allowed to each commander-in-chief of a fleet, which is also maintained by the general government.

Instruments, Warlike Musical. The Turks made use of wind and clashing instruments of different shapes and sizes; all, except one wind instrument, are better calculated for pomp and ceremony, than adapted to military service. The clashing instruments, which the French call *instrumens à choc*, consist of two sorts of drums, and an instrument which is made of two plates of metal. Their wind instruments consist of a winding or crooked trumpet, and of a wooden fife. The big drum which they call *daul*, stands 8 feet high. It is carried by a mounted drummer, who makes use of a thick stick, with which he strikes the upper part, and a small one, with which he plays upon the lower part; these he applies alternately, with much dexterity of hand and great gravity of countenance. This is the only instrument which the Turks use in military exercises or manœuvres, and is constantly beaten when the enemy is near, and round all the outposts, in order to keep the sentinels on the alert. On these occasions the drummer exclaims with a loud voice, *Jagda Allah!* that is, "God is good!"

Insubjection. Want of subjection; state of disobedience to government.

Insubmission. Want of submission; disobedience.

Insubordinate. Not submissive; not submitting to authority.

Insubordination. The quality of being insubordinate; want of subordination; disorder; disobedience to lawful authority; a serious military offense.

Insures. A Gallic people, who crossed the Alps, and settled in Gallia Transpadana, in the north of Italy. Next to the Boii, they were the most powerful and warlike of the Gallic tribes in Cisalpine Gaul. They were conquered by the Romans shortly before the commencement of the second Punic war.

Insufficiency. The quality of being insufficient; want of sufficiency; deficiency; inadequateness; as, the insufficiency of provisions for a garrison.

Insult, To. In a military sense, is to attack boldly and in open day, without going

through the slow operations of trenches, working by mines and saps, or having recourse to those usual forms of war, by advancing gradually towards the object in view. An enemy is said to insult a coast when he suddenly appears upon it, and debarks troops with an immediate purpose to attack.

Insurgents. Soldiers or people generally in a state of insurrection. The term, however, admits of one exception. Hungarian insurgents (*Insurgenten die Ungarischen*) mean the Hungarian militia, called out or summoned by general proclamation, as under the old feudal system.

Insurrection. A rising against civil or political authority; the open and active opposition of a number of persons to the execution of law in a city or state; a rebellion; a revolt.

Intenable. Incapable of being held; untenable; not defensible; as, an intenable fortress.

Intendant, or Intendant Militaire. An officer in the French army charged with the organization and direction of all the civil services attending a force in the field. The officers acting under his orders are those in charge of all the finance services, the provisions, stores, hospitals, artillery train, and transport departments, besides the interpreters, guides, and such like temporary services. The *intendant-en-chef* of an army is the representative of the minister of war; and, short of superseding the general's orders, can exercise, in case of need, all the functions of that high officer of state. The intendance is divided into intendants, ranking with general officers, sub-intendants with colonels, and assistant-intendants with majors; besides these there are cadets, who receive no pay, and constitute a probationary grade.

Intercept. To interrupt communication with, or progress towards; to cut off; as, to intercept the march of an army.

Intercombat. A combat between.

Interior. A word of varied application; as, the *interior flanking angle* is formed by the curtain and line of defense. *Interior radius* is that part of an *oblique radius* extending from the centre of the polygon to the centre of the bastion. *Interior side* is the line of the curtain produced to the two oblique radii of the front, or a line drawn from the centre of one bastion to that of the next.

Interior Form of Cannon. The interior of cannon may be divided into three distinct parts: 1st, the *vent*, or channel which communicates fire to the charge; 2d, the *seat of the charge*, or chamber, if its diameter be different from the rest of the bore; 3d, the *cylinder*, or that portion of the bore passed over by the projectile. See also GROOVES FOR RIFLE CANNON.

Interior Guards. Are police guards, guards of property, etc., who are liable to come in contact with the enemy.

Interior Slope. Is the inclination towards the inner part of a work which is given to the earth forming the rampart or parapet. *Interior crest* is the crest of the interior slope.

Interval. In military dispositions and manœuvres, any given distance or space. In tactics the term is used to signify taken parallel to the front, as opposed to distance or space perpendicularly to the front. *Interval between two battalions* is the space which separates them when they are drawn up for action or when they are encamped. This space is generally wide enough to admit the march of another regiment; that is to say, it is equal to the extent of its front when in line. *Interval between the line and the camp* comprehends the space which lies between the camp and the line of intrenchments. It is generally from 180 to 200 toises in breadth; so that the different sections of troops which are necessary for the security of the camp, may have room to move in, while sufficient ground is left in rear for troops to pass and repass as occasion may require. The same observation holds good with respect to contravallation.

Intrench. Is to make secure against the attack of an enemy by digging a ditch or trench, etc. *To intrench upon*, to invade, to make encroachments upon the property or territories of another.

Intrenched Camp. A large space capable of containing an entire army, surrounded by works of fortification. Frequently an intrenched camp joins a fortress, in which case it is protected by permanent works of considerable strength—detached forts, for instance.

Intrenching Tool. An implement used for intrenching. In view of the deadly fire of modern small-arms it is a matter of great importance that the soldier should be able to get cover. For this reason it has been proposed to make an intrenching tool a part of the soldier's equipment. In the United States army a combination bayonet and intrenching tool is used. See TROWEL BAYONET.

Intrinchment. Is generally a ditch or trench with a parapet. The earth removed to form the ditch is used to construct the parapet. Fascines, with earth thrown over them, gabions, hogsheads, or bags filled with earth, are often employed torevet or strengthen the work when the earth is loose or sandy. *Intrinchments of armies* are the whole works or obstacles by which an army or large body of troops cover themselves for their defense.

Intrepidity. An unqualified contempt of death; an indifference to fortune as far as it regards personal safety; a fearlessness of heart, and a daring enterprise of mind.

Inundation. The act of letting water into a country so that it shall be overflowed, to prevent the approach of an enemy. It is among the most considerable of the various methods which have been devised for im-

peding the approach to a field-work, or indeed, any fortification.

Invade, To. To make a forcible or clandestine entry into the territory of another state; to pass the regular line of frontier of any country, in order to take possession of the interior.

Invalid. A soldier who has been wounded, or has suffered in his health, and in consequence of his good conduct has been recommended to a certain provision for life. Chelsea Hospital is the place allotted for the reception of such objects of public gratitude and benevolence in England; the Soldiers' Home, in Washington, D. C., in the United States, and the Hôtel des Invalides, at Paris, France. In England numbers of invalids are, however, allowed to reside where they choose, and are then known as "out-pensioners."

Invalides. Wounded veterans of the French army, maintained at the expense of the State. See *HÔTEL DES INVALIDES*.

Invaliding. Signifies the return home, or to a more healthy climate, of soldiers or sailors whom wounds or the severity of foreign service has rendered incapable of active duty. The man invalided returns to his duty as soon as his restored health justifies the step.

Invasion. In war, is the entrance or attack of an enemy on the dominions of another.

Inventory of Effects of Deceased Officers and Soldiers. See *APPENDIX, ARTICLES OF WAR*, 125, 126.

Inverness. A royal burgh of Scotland, capital of a county of the same name, situated on both sides of the river Ness. It was a city of the Picts up to 848; taken by Edward I.; retaken by Bruce, 1318; burnt by the Lord of the Isles, 1411; taken by Cromwell, 1649; and by Prince Charles Edward in 1746. The latter was defeated at Culloden, about 5 miles from Inverness, April 16, 1746.

Inversion. A movement in tactics by which the order of companies in line is inverted, the right being on the left, the left on the right, and so on.

Invest. To invest a place is to seize upon all the avenues leading to a town or fortress. On the occasion of an investment, the hostile troops are distributed on the principal commands, to prevent any succor from being received by the garrison, and to keep the ground until the rest of the army, with the artillery, can arrive to form a regular siege. To invest a place is, in fact, to take preparatory measures for a blockade or close siege.

Invincible. Incapable of being conquered or overcome; unconquerable; insuperable; as, an invincible army, etc.

Inwall. To inclose or fortify with a wall.

Iona, Icolmkill, or Hii. The most famous of the Hebrides, in Argyre Co., Scotland. It is about 3 miles long, and varies in breadth from a mile to a mile and a half. It

was founded by Saint Columba, a native of Ireland, in the 6th century, and long remained the chief seat of learning and the centre of missionary enterprises undertaken by the Culdees. In 795, 802, 806, 825, and 986 the island was ravaged by Norsemen, by whom its monks were martyred in the three latter dates.

Ionian Islands. A group of islands running round the west coast of Epirus, and west and south of Greece. After the division of the Roman empire these islands were included in the eastern half, and so continued till 1081, when the Duke of Calabria took possession of them. From this time they underwent a continual change of masters till the commencement of the 15th century, when they by degrees came into possession of the Venetians, who in 1797 ceded them to France. They were seized by Russia and Turkey in 1800, by France in 1807, by Great Britain in 1809, and November 15, 1815, they were formed into a republic under the protectorate of the latter power. In May, 1864, they were formally annexed to Greece.

Ionie Indians. A tribe of aborigines allied to the Caddos, who resided in Texas, and were generally peaceable and friendly.

Iowa. One of the Central States of the United States, lying between the Mississippi and Missouri Rivers. It originally formed a portion of the Louisiana Territory; and permanent settlements commenced to be formed in it about 1833; organized as a Territory in 1838, and admitted as a State in 1846. During the civil war it contributed its full quota of troops to the cause of the Union.

Iowa Indians. A tribe of aborigines of Dakota stock, who inhabited the State which now bears their name. They were closely allied to the Sacs and Foxes.

Ipsara, or Psara. A small island in the Grecian Archipelago, west of Scio; belongs to Turkey. It was taken by the Turks in 1824.

Ipsus. A town of Phrygia, in Asia Minor. Here in 301 B.C., a battle was fought between Antigonus, king of Asia, and the forces of Cassander, Lysimachus, Ptolemy, and Seleucus, which resulted in the defeat and death of Antigonus.

Ipswich. The chief town of the county of Suffolk, England, situated on the Orwell. This town was destroyed by the Danes about 1000.

Ireland. Anciently named *Ierne* and *Hibernia*, is said to have been first colonized by Phœnicians. Some assert that Partholani landed in Ireland about 2048 B.C.; that the descent of the Damnonii was made about 1463 B.C.; and that this was followed by the descent of Herber and Heremon, Milesian princes, from Galicia, Spain, who conquered Ireland, and gave to the throne 171 kings. The Danes and Normans invaded Ireland in 795; but were totally defeated by Brian Boriomhe at Clontarf, April 28, 1014. In 1172, King Henry II. of England invaded Ireland with a formidable armament, and received homage from several of the minor native chiefs, and from the chief Norman adventurers, granting to the latter charters authorizing them, as his subjects, to take possession of the entire island in his name; which they partially succeeded in accomplishing. Subsequently the authority of the English crown became limited to a few towns on the coast, and the district termed "the Pale," comprising a small circuit about Dublin and Drogheda. Henry II. received the title of "king of Ireland" in 1541, by an act passed by the Anglo-Irish Parliament in Dublin; and about the same period, some of the native princes were induced to acknowledge him as their sovereign, and to accept peerages. The attempts of the English government to introduce the reformed faith stirred up dissensions in Ireland. Among the first to revolt was the Earl of Desmond, after whose death, in 1588, his vast estates in Munster were parceled out to English settlers. Soon after the chief clans of Ulster took up arms; and in opposing them, the forces of Queen Elizabeth, commanded by officers of high military reputation, encountered many reverses, the most serious of which was that in 1598 at the battle of the Yellow Ford, where the English army was routed and its general slain. Philip III. of Spain, at the solicitation of the Irish chief, dispatched a body of troops to their assistance in 1601, which landed in the extreme south, instead of in the north, as had been expected, were unable to effect anything, and were constrained to surrender. Although Elizabeth was supported by numbers of native Irish, the northern chiefs, O'Neill and O'Donnell, held out till the queen's government came to terms with them in 1608, recognizing them as earls of Tyrone and Tirconnell. In 1608 these noblemen having apprehensions for their personal safety quitted Ireland, and retired to the continent. Their withdrawal enabled James I. to carry out that project of parceling out the north of Ireland to Protestant Scotch and English settlers. The Irish took advantage of the contentions in England to rise in insurrection (1641) and massacre the Protestants. It is believed that nearly 40,000 fell victims to their fury. The country continued in a state of anarchy till 1649, when Cromwell overran it. At the revolution the native Irish generally

took the part of James II., the English and Scotch "colonists" that of William and Mary; and the war was kept up for four years (1688-1692). The Irish again rebelled in 1798, and were not suppressed until 1800. Ireland was incorporated with England and Scotland in 1801. Several insurrections have taken place since the latter date but were quickly suppressed. For important military events in Ireland, see separate articles.

Irish Brigade. A body of men who followed the fortunes of James II., and were formed into regiments under the monarchy of France.

Iron Cross. A Prussian order of knighthood, instituted on March 10, 1813, by Frederick William III., and conferred for distinguished services in the war which was then being carried on. The decoration is an iron cross with silver mounting. The grand cross, a cross of double the size, was presented exclusively for the gaining of a decisive battle, or the capture or brave defense of a fortress. It was revived by William I. in the Franco-Prussian war, and awarded by him to his son for his victory at Weissenbourg, August 4, 1870.

Iron Crown. The crown of the ancient Lombard kings; is a broad band of gold set with jewels, within which is a thin plate or fillet of iron, and is declared by tradition to have been hammered from one of the nails of the true cross. It has been used at the coronation of 34 different monarchs, including Charlemagne, Henry VII. of Germany, Charles V., and Napoleon. After the peace of Vienna in 1866, the crown was presented by the emperor of Austria to Victor Emmanuel, king of Italy.

Iron Ores. *Character of Pig-iron.*—Ores suitable for "gun-metal" should be reduced in the smelting-furnace, with charcoal and the warm blast, varying from 125° to 300° Fahr., depending upon the ore used. Iron thus made, or pig-iron, should be soft, yielding easily to the file and chisel; the appearance of the fracture should be uniform, with a brilliant aspect, dark gray color, and medium-sized crystals. *Character of Gun-metal.*—When remelted and cast into cannon, it should approach that degree of hardness which resists the file and chisel, but not so hard as to be bored and turned with much difficulty. Its color should be a bright, lively gray; crystals small, with acute angles, and sharp to the touch; structure uniform, close, and compact. *Magnetite.*—*Octahedral Iron Ore.*—Color iron-black. Streak black. Brittle. The black streak and magnetic properties distinguish this species from the following: *Specular Iron Ore.*—*Hematite.*—Often massive granular; sometimes lamellar or micaceous. Also pulverulent and earthy. Color, dark steel-gray or iron-black, and often when crystallized having a highly splendid lustre; streak-powder cherry-red or reddish-brown. The metallic varieties pass into an earthy ore of a red color,

having none of the external characters of the crystals, but perfectly corresponding to them when they are pulverized, the powder they yield being of a deep red color, and earthy or without lustre. Sometimes slightly attracted by the magnet. *Limonite*.—*Brown Iron Ore*.—Usually massive, and often with a smooth botryoidal or stalactitic surface, having a compact fibrous structure within. Also earthy. Color, dark brown to ochre-yellow; streak, yellowish-brown to dull yellow. Lustre, sometimes sub-metallic; often dull and earthy; on a surface of fracture frequently silky. *Spathic Iron*.—*Carbonate of Iron*.—*Chalybite*.—Usually massive, with a foliated structure, somewhat curving. Sometimes in globular concretions or implanted globules. Color, light grayish to brown; often dark brownish-red, or nearly black on exposure. Streak, uncolored. Lustre, pearly to vitreous; translucent to nearly opaque.

Irons. Fetters or instruments made of iron, with which a prisoner is shackled. *To be put in irons*, is to be handcuffed and confined in fetters.

Ironsides. A strong man. A cuirassier;—applied also to Cromwell's cavalry.

Iroquois, or Six Nations. The name given by the French to the Indian confederacy of the Mohawks, Oneidas, Onondagas, Cayugas, and Senecas, to which were afterwards added the Tuscaroras, after being driven from their hunting-grounds in North Carolina. This once formidable confederacy is now nearly extinguished, but remnants of it are still found scattered through the State of New York.

Irregular. Not regular; not according to common form or rules; as, an irregular building or fortification. See **FORTIFICATION, IRREGULAR.**

Irregular Cavalry. A term now almost obsolete. It applied a few years ago to regiments of horsemen raised under certain conditions in the East Indies. These conditions were that each man should provide his own horse, arms, accoutrements, and clothing, receiving in return a monthly sum, which also included his pay. To these regiments only three English officers were appointed, the other officers being natives. These regiments are still paid in the same way, but they are clothed, armed, and equipped in a uniform manner; the number of British officers is increased, and they are no longer styled irregular cavalry.

Irregularity. A violation of the customs of service,—a delinquency which is subject to censure but not serious enough to be brought before a court-martial.

Irun. A town of Spain, near the left bank of the Bidassoa. It is a place of great antiquity, having been in existence in the time of the Romans. The Carlists were defeated by the British Legion, under Gen. Sir de Lacy Evans, in the battle of Irun, May 16, 1837.

Isabella the Catholic, Order of. A Span-

ish order of knighthood, founded by Ferdinand VII., March 24, 1815, as a reward of loyalty, for the defense of the possessions of Spanish America. At present, it is conferred for all kinds of merit. The sovereign is the head of the order, which is divided into the three classes of Grand Crosses, Commanders, and Knights.

Isauria. A province in Asia Minor, the inhabitants of which were a wild and semi-barbarous race, who lived by rapine and plunder. The Romans surrounded Isauria with a chain of fortresses, but the Isaurians broke through them and remained as untamable as before. Under the empire, army after army was sent against Isauria, which stood to Rome, and afterwards to Constantinople, very much in the relation that Circassia now does to Russia. In the 8th century their national vanity was gratified by a countryman of their own being appointed to the throne. From this date they gradually ceased to be formidable.

Ischia. An island in the Gulf of Naples, 6 miles from the coast, and 17 miles west from Naples. In 1807, Ischia was taken by a British and Sicilian force.

Isernia. A place in Southern Italy, on the west slope of the Apennines, where the Sardinian general Cialdini defeated the Neapolitans, October 17, 1860.

Isle of France. See **MAURITIUS.**

Ismail, or Ismailov. A strong town of Turkey in Europe, on the north side of the Kilian arm of the Danube. This place was long in the possession of the Turks; it was stormed by the Russians, under Suwarrow, in 1790. It remained in the possession of Russia until 1856, when it was restored to Turkey by the removal of the Russian frontier.

Isolé (Fr.). This word is used among the French, to express any body or thing which is detached from another. It is variously applied in fortification. Thus a pavilion or a barrack which is not joined to any other wall or building is called *isolé*, because it stands alone, and a person may walk entirely round it. A parapet is also said to be *isolé* when there is an interval of 4 or 5 feet existing between the rampart and its wall; which interval serves as a path for the rounds.

Ispahan. A famous city of Persia, capital of the province of Irak-Ajemi, situated on the Zendarud. In 1722 it was taken by the Afghans, and in 1729 was retaken by Nadir Shah. It has fallen gradually into decay.

Issue. Event; consequence; the ultimate result of any undertaking; the termination of any contest. A term also applied to the distribution of supplies; as, issue of rations, issue of clothing, etc., to troops.

Issues. In the British service, are certain sums of money which are, at stated periods, given to public accountants for public service; and for the honest distribution of which, every individual so intrusted is re-

sponsible to Parliament. *Regimental issues* are moneys paid by regimental agents, acting under the authority of their respective colonels, for regimental purposes.

Issus. An ancient city and seaport in Cilicia, in Asia Minor, close to the frontier of Syria, on or near the head of the Sinus Issicus, now the Gulf of Scanderoon. It was in the neighborhood of this city that Alexander the Great annihilated the Persian army under Darius in 333 B.C. Here too was fought (194 A.D.), the bloody battle between Septimius Severus and Pescennius Niger, by virtue of which the former became sole master of the Roman empire. The exact site of Issus has not yet been discovered.

Ishtaf. A town of Afghanistan, province of Cabul (Cabool). It was taken and partly destroyed by the British in 1842.

Italy. A peninsula in the south of Europe. The invading Pelasgians from Greece, and the aborigines (Umbrians, Oscans, and Etruscans), combined, formed the renowned Latin race still possessing the southern part of Europe. The history of Italy is soon absorbed into that of Rome, founded 753 B.C. Previous to the 15th century it was desolated by intestine wars and the interference of the German emperors; since then, Spain, France, and Germany have struggled for the possession of the country, which has been divided among them several times. Spain predominated in Italy during the 16th and 17th centuries; but was compelled to yield to the house of Austria at the beginning of the 18th century. The victories of Bonaparte in 1797-98 changed the government of Italy; but the Austrian rule was re-established at the peace of 1814. In 1848 the Milanese and Venetians revolted and joined Piedmont, but were subdued by Radetzky. The hostile feeling between Austria and Piedmont gradually increased till war broke out in April, 1859, in which the Austrians were de-

feated, and the kingdom of Italy was re-established in 1861. Another war with Austria was declared in June, 1866, but peace was signed in October, same year, and Venetia was ceded to Italy. For other details, see **ROME** and the various Italian cities throughout this volume.

Ithome. A mountain fortress of Messenia, memorable for the defense there made for many years against the Spartans in the first Messenian war. It was afterwards the citadel of Messene, when that city was founded by Epaminondas.

Itinéraires (Fr.). Itinerary movements or days of march. A technical phrase among the French to denote the order and the disposition which a body of men or an army is directed to observe in its march from one camp to another, or to any particular quarter or destination.

Itzehoe. An ancient town in the duchy of Holstein. The original castle around which Itzehoe was built by Charlemagne in 809. This town was twice taken by Tilly in the Thirty Years' War, and in 1657 a great portion of it was burned down by the Swedes.

Ivry-la-Bataille. A town of France, department of Eure, 40 miles west of Paris. It is celebrated for the decisive victory which was gained by Henry IV. of Navarre over the forces under the Duke of Mayenne in 1590.

Ixcacuitla. A town in the southern part of the state of Puebla, Mexico. It is noted in Mexican history as the scene of a sharp battle fought January 1, 1817, between Mexican insurgents under Gen. Mier of Teran, and the Spanish troops under La Madrid.

Izucar. A city of the state of Puebla, Mexico. Near here Gen. Matamoros, fighting for the independence of his country, gained a victory over the Spaniards, February 24, 1812.

J.

Jaca, or Jacca. A fortified town of Spain, in the province of Aragon, situated at the foot of the Pyrenæes, on the river Aragon. It is a town of great antiquity, and, from its position, has been the scene of many sanguinary contests. Its occupation was eagerly coveted by every invader of the Peninsula, from Cato and Julius Cæsar to the generals of Napoleon.

Jack. See **IMPLEMENTS**.

Jack (Fr. *jacque*). A coat of defensive armor, quilted and covered with leather,

worn particularly by horsemen; a buff-jerkin; rarely, a coat of mail.

Jack, Hydraulic. See **HYDRAULIC JACK**.

Jack in the Box. A very handy engine, consisting of a large wooden male-screw turning in a female one, which forms the upper part of a strong wooden box, shaped like the frustum of a pyramid. It is used by means of levers passing through holes in it as a press in packing, and for other purposes.

Jack Wambasium. A sort of coat ar-

mor, formerly worn by horsemen, not of solid iron but of many plates fastened together, which some persons by tenure were bound to furnish upon any invasion.

Jack-boots. Cavalry boots, made of thick, firm leather, hardened in a peculiar manner. They were sometimes lined with plates of iron.

Jacket. A short, close garment, extending downward to the hips; a short military coat is so called. In the manufacture of ordnance a tube inclosing and reinforcing another tube is called a jacket.

Jack-man. One wearing a jack; a horse-soldier; a retainer.

Jack-screw. See IMPLEMENTS.

Jacob, St. A Swiss hamlet, about a mile south of Basle, on the Bienne road, and the scene of a great battle fought in 1444, between 1600 Swiss and a vastly more numerous French force, under the dauphin, afterwards Louis XI. The Swiss fought for ten hours, slew three times their number of the enemy, but were themselves cut off to 10 men. This battle is known as the "Swiss Thermopylæ."

Jacobins. One of those clubs which played so conspicuous a part in the first French revolution. In 1792 they took the name of "The Society of the Friends of Liberty and Equality." Immediately after the fall of the king, the Jacobins began that struggle against the Girondists which ended in the destruction of the latter. After the fall of Robespierre during the Convention they rapidly lost influence, and were at last suppressed.

Jacobites. This name was given to those who, at the English revolution in 1688, adhered to the cause of the dethroned James II. In Ireland the adherents of the Stuarts rose in rebellion, but were vanquished by force of arms. In Scotland attempts were made in 1715 and 1745 by the descendants and adherents of James II. to expel the house of Hanover. Both were unsuccessful, and involved the ruin of many noble families.

Jacob's-staff. A mathematical instrument for taking heights and distances, used by military engineers.

Jacquerie, Insurrection of the. The name given to the war of the French peasantry, which broke out in 1858. The immediate occasion of it was the enormities perpetrated by Charles the Bad, king of Navarre, and his adherents; but it was really caused by long-continued oppression on the part of the nobles. Suddenly rising against their lords, the peasants laid hundreds of castles in ruins, murdered the nobles, and violated their wives and daughters, practicing every enormity, and acting, as they said, on the principle of doing as had been done to them. For some weeks they were successful; but the magnitude of the danger induced the nobles to make common cause against them, and on June 9 the peasants were defeated with great slaughter near Meaux by

Capitain de Buch and Count of Foix. This put an end to the insurrection.

Jade (Fr.). A very hard stone, of an olive color, from which the handles of swords and sabres are manufactured in Poland and Turkey.

Jaen. Formerly an independent Moorish kingdom; is now a province of Spain. It was conquered by the Moors on their entrance into Spain. Jaen maintained its independence as a Moorish state till 1284, when it fell into the hands of Ferdinand III., and was added to the kingdom of Castile.

Jaffa, Yafa, or Joppa. A town of Asiatic Turkey, in the province of Syria, on the Mediterranean. This place attained its greatest prosperity in the times of the Crusaders, when it became the principal landing-place of the warriors of Christendom. In 1799 it was stormed by the French under Bonaparte, and here was perpetrated his shameful massacre of Turkish prisoners. In 1832, Mohammed Ali made himself master of it; but the Turks, with the assistance of the British and Austrians, took it from him again in 1840.

Jaffna, or Jaffnapatam. The capital of the district of Jaffnapatam, in Ceylon. The town is fortified, and possesses a good citadel; but it was taken, after a short resistance, by the British troops in 1795.

Jaghire. An Indian term, signifying the assignment of the revenues of a district to a servant or dependant of government, who is hence called *Jaghiridar*. Jaghires are frequently given in India to persons as a reward and compensation for their military services.

Jaghire Asham. An Indian term, signifying land granted for the support of the troops.

Jahpoor. A town of Hindostan, in the presidency of Bengal, 15 miles from Agra. This place has been the scene of two decisive battles; the first fought in 1688, between Aurungzebe and his brother Darah Sheeh; and the second, in 1707, between Alum and Azain Ushaum, all Indian princes.

Jalapa. A city of the Mexican confederation, 60 miles west-northwest of Vera Cruz. In 1847-48 the American troops occupied it.

Jalet (Fr.). See GALET.

Jalons (Fr.). Long poles with a wisp of straw at the top. They are fixed at different places and in different roads, to serve as signals of observation to advancing columns, when the country is inclosed, etc. They are likewise used as camp colors to mark out the ground on days of exercise.

Jamaica. One of the West India Islands, or Greater Antilles, which belongs to Great Britain, and forms the most considerable and valuable of its possessions in that quarter. It was discovered by Columbus in 1494, and colonized by the Spaniards in the early part of the 16th century. In 1655 it was taken by the English, when 3000 British soldiers

who had served in the Parliamentary army settled there. In 1866 a revolt of a large portion of the negro population took place, which was promptly suppressed.

Jamb. To squeeze tight.

Jambeaux, or Jambes (Fr.). Greaves; armor for the legs, made of waxed leather or metal; much used in the Middle Ages.

James of the Sword, St. A military order in Spain, instituted in 1170 under the reign of Ferdinand II., king of Leon and Galicia. Its object was to put a stop to the incursions of the Moors; these knights obliging themselves by a vow to secure the roads. The highest dignity in that order is that of grand master, which has been united to the crown of Spain. The knights were obliged to give proof of their descent from families that had been noble for four generations on both sides; they were also required to make it appear that their ancestors were neither Jews, Saracens, nor heretics, nor had ever been called into question by the Inquisition.

James Island. One of the sea islands of Charleston Co., S. C., having Charleston harbor and Ashley River on the north. The battle of Secessionville (June 11, 1863) and several other spirited engagements occurred upon this island during the late civil war.

James Projectile. See PROJECTILES.

James Rifle. An American sporting rifle, which was popular many years ago.

James, St. A town of France, in the department of Manche. William the Conqueror built a strong fortress here, which remained in possession of the English till 1448.

Jamestown. A former village of James City Co., Va., on the north bank of the James River. The first English settlement in the United States was made at this place in 1608, but nothing now remains but a few ruins. The forces of Wayne and Lord Cornwallis had an engagement near here in 1781.

Jangar. A kind of ponton constructed of two boats with a platform laid across them, which is used by the natives in the East Indies to convey horses, cattle, etc., across rivers.

Janissar-Agasi. Commander-in-chief of the Janissaries.

Janissaries (Turk. *ieni tcheri*, "new soldiers"). An order of infantry in the Turkish army: originally prisoners trained to arms; were first organized by Orcan, about 1380, and remodeled by his son Amurath I., 1360; their numbers being increased by following sultans. In later days they degenerated from their strict discipline, and several times deposed the sultan. During an insurrection, June 14-15, 1826, when nearly 8000 of them were killed, the Ottoman army was reorganized, and a firman was issued on June 17 abolishing the Janissaries.

Januarius, Order of St. An order of knighthood founded by King Charles of Sicily (afterwards Charles III. of Spain) on

July 6, 1788. It was abolished after the French invasion of 1806, and re-introduced in 1814. The badge is a gold octagonal white and red enameled cross, with gold lilies in the upper and side angles. The obverse represents St. Januarius in episcopal robes with an open book. The round middle of the reverse shows a golden open book, and two phials partly filled with blood. The knights are either *Cavalieri di Giustizia*, who must count four noble generations, or *Cavalieri di Grazia*.

Japan. An Asiatic empire, composed of Japan, or Nippon, and 3850 isles, with nearly 40,000,000 inhabitants. For military events in Japan, see separate articles in this book.

Jargeau. A town of France, in the department Loiret, 10 miles from Orleans. This place was taken, after a short siege, by the Earl of Salisbury, in 1428.

Jarnac. A town of France, situated on the Charente. The Protestants under Coligny and the Prince of Condé were defeated near Jarnac in 1569, when the latter was slain.

Jassy, or Yassy. The chief town of Moldavia, and the residence of the hospodar or prince of that country. Jassy has been frequently taken by the Russians, but it has always been restored at the conclusion of each war with Turkey. In 1822 it was burned by the Janissaries, from which disaster it has never recovered.

Jauts, or Jats. A people of Hindostan, who have at different times made some figure in its annals. The first historical mention of them occurs in the beginning of the 11th century, on the invasion of India by Mahmoud the Gaznevide, when they were completely defeated and driven into the mountainous districts of the interior of India. We find them afterwards, under the growing imbecility of Aurungzebe's successors, continually extending their conquests. They suffered a reverse, however, at the hands of Ahmed Shah, the sovereign of Cabul, who invaded Northern India, and overran a great portion of their territory. The Jaut chief afterwards became an ally of Ahmed Shah, having treacherously betrayed his former allies, the Mahrattas, at the battle of Paniput, January 14, 1761. When the British power became predominant, the rajah of the Jauts, Rungeet Sing, sought security by concluding a treaty by which he agreed to assist England against all enemies, and by this means he retained the government of his territories. In 1808, however, on the defeat of Holkar by the British, he received into Bhurtpore the discomfited army. The city was besieged, and cost the British an immense number of lives; but at length, despairing of effectual resistance, the rajah agreed to compel Holkar to quit the place. For this breach of the terms of the treaty he was compelled by the English to pay a heavy fine. Disputes about the succession to the throne afterwards led to the inter-

ference of the British, and the hitherto impregnable fortress of Bhurtpore was taken by Lord Combermere, January 18, 1826, after a desperate resistance on the part of the Jauts.

Java. A large island in the Eastern Archipelago; is said to have been reached by the Portuguese in 1511, and by the Dutch in 1596. The latter, who now possess it, built Batavia, the capital, about 1619. The atrocious massacre of 20,000 of the unarmed natives by the Dutch, sparing neither women nor children, to possess their effects, took place in 1740. The island capitulated to the British, September 18, 1811; but it was restored to Holland in 1814.

Javelin (Lat. *pilum*). A short and light spear used for darting against an enemy. In the ancient Roman legions, the first and second lines were armed with them, and in those days they were considered excellent offensive weapons.

Je Maintiendrai ("I will maintain"). The motto of the house of Nassau. When William III. came to the throne of England, he continued this, but added "the liberties of England and the Protestant religion," at the same time ordering that the old motto of the royal arms, "*Dieu et mon droit*" should be retained on the great seal, 1689.

Jean de Pied de Port, St. A town of France, in the department of the Lower Pyrenees, on the Nive. Near this place is the pass of Roncevaux, or Roncesvalles, where, in 778, the army of Charlemagne was defeated, and Roland, the distinguished Paladin, mortally wounded.

Jelalabad. A town of Afghanistan; capital of a province of the same name, 75 miles southeast from Cabul (Cabool). It is memorable for the successful resistance made there in 1841-42 by Sir Robert Sale, with a handful of British troops against a large besieging force of Afghans. Its fortifications were destroyed by the British in 1842, when they evacuated the country.

Jeloudar. An East Indian term, signifying to belong to the train or equipage.

Jemadar. A native lieutenant in an Indian native infantry or cavalry regiment.

Jemappes. A village and commune of Belgium, in the province of Hainault, 2 miles west from Mons. In 1792, the French under Dumouriez gained a great victory over the Austrians near this place.

Jemaulabad. A town and fortress in the south of India, province of Canara, which was originally called Narasingha Augady. The first, which was built by Tippoo, stands on the summit of an immense rock, which may be deemed impregnable, as it is wholly inaccessible except by one narrow way. After the fall of Seringapatam, it sustained a siege of six weeks from the British, when being bombarded, it was taken, and the commander having poisoned himself, his principal officers were hanged. It was afterwards surprised and taken by a band of insurgents or plunderers, when it was re-

duced, after a blockade of three months, and all that did not escape were summarily executed.

Jena. A town of Germany, in the grand duchy Saxe-Weimar-Eisenach, situated in a romantic valley at the confluence of the Leutra with the Saale. In this vicinity was fought the great battle of Jena, October 14, 1806, between the French and Prussian armies, in which the latter was totally defeated.

Jeñizer-effendi. An appointment among the Turks, which in some degree resembles that of provost-marshal in European armies. The only functions which this officer is permitted to exercise are those of judge to the company. He sits on particular days for the purpose of hearing the complaints of the soldiers, and of settling their differences. If a case of peculiar difficulty should occur, he reports the case to the *Aga*, whose opinion and determination are final.

Jericho. Once one of the most flourishing cities of Palestine, situated a few miles northeast of Jerusalem. The Israelites captured and destroyed it on their first entry into Canaan. In the time of Herod it was rebuilt, but was destroyed in the reign of Vespasian, and again rebuilt under Hadrian. During the Crusades, it was repeatedly captured, and at last destroyed. At the present day its place is occupied by a miserable village called Richa.

Jersey. One of the Channel Islands, and the largest and most southerly of the group, situated about 15 miles west from the coast of France, and belonging to Great Britain. Various attempts have been made by the French to possess themselves of this island, but without success. The most remarkable was in 1781, when they were repulsed by the local militia.

Jerusalem. A celebrated city of Syria, the capital of the ancient Judæa and the modern Palestine. This city was called Salem in 1918 B.C.; its king was slain by Joshua, 1451 B.C. It was taken by David, 1048 B.C., who dwelt in the fort, calling it the City of David. Jerusalem was taken by the Persians in 614; retaken by the emperor Heraclius, 628; by the Saracens, 637; and by the Crusaders, when 70,000 infidels were put to the sword; taken by Saladin, 1187; by the Turks, who drove away the Saracens, 1217 and 1289. It was held by the French under Bonaparte, February, 1799.

Jet (Fr.). A term signifying the motion of any body that is urged forward by main force; it likewise means the space which is gone over by any propelled body; and sometimes the instrument from which anything is thrown or shot; as, the cross-bow, etc. *Jet des bombes* is a phrase adopted instead of *tir*, which formerly expressed the course that a shell took when it was thrown out of a mortar by the power of gunpowder.

Jets. See PYROTECHNY.

Jiddah, or Jeddah. A trading town of the Hedjaz, Arabia, about 60 miles west from

Mecca. On June 15, 1858, the inhabitants rose against the Christians resident among them, and massacred a considerable number of them. In August of the same year the town was bombarded by the British, and satisfaction rendered.

Jingal, or Jingall. A small, portable piece of ordnance, to be fired from the ground or on a wall, resting on a long, slender butt-end, and two legs. This piece was used in India. See GINGALS.

Joar. An East Indian term, signifying a general massacre of the women and children, which is sometimes performed by the Hindoos, when they find they cannot prevent the enemy from taking the town. When this dreadful and unnatural ceremony is to take place, a spot is selected which is filled with wood, straw, oil, etc. The victims are inclosed and the whole is set on fire.

John (St.) of Jerusalem, Knights of. See SAINT JOHN OF JERUSALEM, THE ORDER OF THE KNIGHTS HOSPITALIERS OF.

Join. A technical word used in the British service, signifying to effect the junction of one military body with another. In a more limited sense, it means the accession of an individual, voluntary or otherwise, to a corps or army. If an officer, on being ordered to join, omits to do so willfully, he is liable to be tried by a general court-martial, or to be peremptorily suspended for being absent without leave.

Jooday Perraput. An East Indian term, signifying a slave taken in war.

Jour (Fr.). The tour of duty which is done in the course of a day and night. *Etre de jour*, to be officer of the day, or to command a body of troops at a siege or otherwise in the capacity of a general officer, etc.

Journal (Fr.). A public record or general orderly book, kept in the French service, and in which every transaction that occurred during a siege is entered by the governor of the town, for the inspection of a superior authority. The general officer who carried on the siege of a place likewise kept a document of the same kind, and minuted down everything that happened under his command. So that the journal which was kept in this manner was a circumstantial detail of what occurred, day after day, during the attack and defense of a town.

Journals of Defense. In the American service during war, the commander of a place, and the chiefs of engineers and of artillery, shall keep journals of defense, in which shall be entered, in order of date, without blank or interlineation, the orders given or received, the manner in which they are executed, their results, and every event and circumstance of importance in the progress of the defense. These journals shall be sent after the siege to the Department of War.

Journals of March. Commanding officers of troops marching through a country little known will keep journals of their

marches according to a form laid down in Army Regulations. At the end of the march a copy of the journal will be retained at the station where the troops arrive, and the original will be forwarded to the headquarters of the department or *corps d'armée*. Thence, after a copy has been taken, it will be transmitted, through the headquarters of the army, to the adjutant-general, for the information of the War Department. The object of the journal is to furnish data for maps, and information which may serve for future operations. Every point of practical importance should therefore be noted.

Journée (Fr.). A term used among the French to express any particular engagement or battle; as, *la journée de Marengo*, the battle of Marengo. We frequently adopt the word in the same sense; thus, a hard-fought *day* signifies a hard-fought *battle*.

Joust, or Just. An exercise of arms and horsemanship, performed in the Middle Ages by knights and nobles. In the joust, the combatants engaged one another singly, each against his antagonist. The weapon most in use in the joust was the lance, but sometimes the battle-axe and sword were employed. To direct the lance anywhere but at the body of the antagonist was reckoned foul play. In the joust of peace, or *joute de plaisance*, a foot encounter preceded the mounted combat.

Joute (Fr.). A close fight between two individuals. It likewise means an engagement at sea.

Joves (Fr.). The two sides in the epaulement of a battery which form the embrasure are so called.

Joyeuse (Fr.). A name given to the sword of Charlemagne.

Judge-Advocate. An individual appointed to officiate as public prosecutor upon every general court-martial for the trial of officers and soldiers accused of a breach of the Articles of War, general regulations, or any conduct prejudicial to good order and discipline. He is appointed by the officer authorized to assemble a general court-martial, and must be relieved by the same authority. His duties are various and important (see De Hart's "Military Law," Benét on "Courts-Martial," and Scott's "Analytical Digest of Military Law," on duties, etc., of judge-advocate); he must be present at the court for which he is appointed, not only to record all its proceedings, but also in order to impart validity to its jurisdiction. He advises the court on points of law, of custom, and of form, and invites their attention to any deviation therefrom. If any question of law arises out of the proceedings, and he is called upon for his opinion, he is bound to give it. It is his duty to take care that the accused does not suffer from a want of knowledge of the law, or from a deficiency of experience or ability to solicit from witnesses, or develop by the testimony on the trial, a full state-

ment of the facts of the case as bearing on the defense. If the court, or a member thereof, should deviate from the letter of the law, or assume a power at variance with it, the judge-advocate is bound to point out the error, which should become a part of the record. It is now admitted that the custom of appointing persons from civil life to officiate as judge-advocate is clearly objectionable. It creates a ministerial officer without legal responsibilities, and necessarily commits to his hands high interests of the government, and to some extent the rights and reputation of individuals, to be treated and observed without any stronger guaranty of fidelity than his own sense or impression of moral obligation. In the important duties of the judge-advocate as recorder, adviser, and prosecutor, the utmost deference to the dignity of the court should be apparent; a delicate courtesy and modest demeanor should be characteristic of his address, while his argument may be replete with all the vigor and energy which knowledge imparts and which truth demands.

Judge-Advocate-General. Of the British forces is stationed in London, and is regarded as a civil officer, and is paid from the civil department. The office is generally held by an experienced barrister, to whom all proceedings of courts-martial are referred for remarks as to legality and regularity. In the United States he is a staff-officer with the rank of brigadier-general, who receives, revises, and causes to be recorded the proceedings of all courts-martial, courts of inquiry, and military commissions, and has charge of the records of the bureau of military justice.

Judge-Advocates, Corps of. In the United States, consists of four general staff-officers with the rank of major; who are usually assigned to duty at the headquarters of geographical divisions and departments, and may be detailed as judge-advocates of military courts.

Judge - Martial, or Advocate - General. In former years was the supreme judge in martial law, as to the jurisdiction and powers of military courts in the British system.

Junior. One having a lower rank. When the grade is the same, the one having the more recent commission or warrant.

Junk-wads. Are used for proving cannon. *Wad-molds* for each caliber—consisting of two cast-iron cylinders of different diameters set in oak, or of two strong pieces, strapped with iron, and joined by a hinge—are employed in their manufacture. The junk, after having been picked, is compressed by being beaten in the smaller mold with a *maul* and *cylindrical drift*—the latter nearly of the size of the mold—until it assumes the requisite dimensions; it is then taken out by raising the upper part of the mold, and closely wrapped with rope-yarn passed over it in the direction of the axis of the cylinder, and fastened by a few turns around the middle of the wad. It is then

placed in the large mold, and again beaten with the maul and drift until its diameter is increased to that of the mold; when it is taken out and its diameter verified by a wooden gauge corresponding to the large shot-gauge of the caliber.

Jupon, or Just-au-Corps. A surcoat. The name jupon is chiefly applied to the short tight form of that military garment in use in the 14th century. It was a sleeveless jacket or overcoat, composed of several thicknesses of material sewed through, and faced with silk or velvet, upon which were embroidered the arms of the wearer. It fitted closely to the body, and, descending below the hips, terminated in an enriched border of various patterns.

Jurisdiction. Legal authority; extent of power. All sutlers and retainers to the camp, and all persons whatsoever serving with the armies of the United States in the field, though not enlisted soldiers, are to be subject to orders, according to the rules and discipline of war. To decide exactly where the boundary-line runs between civil and military jurisdiction as to the civilians attached to an army is difficult; but it is quite evident that they are within military jurisdiction, as provided for in the Articles of War, when their treachery, defection, or insubordination might endanger or embarrass the army to which they belong in its operations against what is known in military phrase as "an enemy." Probably the fact that troops are found in a region of country chiefly inhabited by Indians, and remote from the exercise of civil authority, may enter into the description of "an army in the field." Persons who attach themselves to an army going upon an expedition against hostile Indians may be understood as agreeing that they will submit themselves for the time being to military control. All officers, conductors, gunners, matrosses, drivers, or other persons whatsoever receiving pay or hire in the service of the artillery or corps of engineers of the United States, shall be subject to be tried by courts-martial. The officers and soldiers of any troops, whether militia or others, being mustered and in pay of the United States, shall, at all times and in all places, when joined, or acting in conjunction with the regular forces of the United States, be governed by the Rules and Articles of War, and shall be subject to be tried by courts-martial in like manner with the officers and soldiers in the regular forces; save only that such courts-martial shall be composed entirely of militia officers. No officer, non-commissioned officer, soldier, or follower of the army shall be tried the second time for the same offense. No person shall be liable to be tried and punished by a general court-martial for any offense which shall appear to have been committed more than two years before the issuing of the order for such trial, unless the person by reason of having absented himself, or some other manifest impediment, shall not have been

amenable to justice within that period. No garrison or regimental court-martial shall have the power to try capital cases, or commissioned officers; neither shall they inflict a fine exceeding one month's pay, nor imprisonment, nor put to hard labor any non-commissioned officer or soldier, for a longer time than one month.

Just. See **JOUST**.

Justice, Military. That species of justice which prevails in the army, and which is administered by military tribunals in accordance with the Articles of War. In Prussia justice is frequently obtained through what is known as the court of honor. See **COURT OF HONOR**, **COURT-MARTIAL**; also, **APPENDIX, ARTICLES OF WAR**, 29, 30, and 72 to 105.

Justice, Military, Bureau of. In the United States consists of one judge-advocate-general, with the rank, pay, etc., of brigadier-general. See **JUDGE-ADVOCATE-GENERAL**.

Juterbogk. A small town of Prussia, in the province of Brandenburg. In the vicinity is the field of Dennewitz, where the Prussians defeated the French, September 6, 1813. See **DENNEWITZ**.

Jutland. The only considerable peninsula of Europe that points directly north, forms a portion of the kingdom of Denmark, and comprises the province of North Jutland. South Jutland was taken by the allies in 1813, and restored in 1814. In historical times, the Jutes took part in the expedition of the Saxons to England. As allies of the Saxons, they waged war with Charlemagne, and under the name of Normans (Northmen), frequently desolated the coasts of Germany and France.

Juzail. A heavy rifle used by the Afghans.

K.

Kabbade (Fr.). Military clothing of the modern Greeks; Roman *sagum*.

Kabyles. An aboriginal African people, inhabiting the mountains of the Atlas. They are an independent race, who mainly exist by plundering the people of the plains. They are divided into numerous tribes, each of which has its distinctive name, with the prefix *Beni* before it. See **BENI-ABBES**, **BENI-ACHOUR**, etc.

Kaffa. See **CAFFA**.

Kaffraria. An extensive country in Southern Africa, extending from the north of Cape Colony to the south of Guinea. The English war with the natives of the country began in 1798, and continued with intermissions until March, 1853. The Kaffirs, headed by Mokanna, a prophet, attacked Grahamstown, but were repulsed with much slaughter in 1819; again defeated in 1828, 1831, and 1834. After a series of engagements, they were attacked by Governor-General Cathcart, and completely defeated, December 20, 1852, and peace was restored in the following March.

Kagosima. A town of Japan, which was bombarded by the English in 1863, in retaliation for the murder of one of their subjects.

Kahlenberg. A hill in Austria, on the Danube, a little northwest of Vienna. On its side the army of Sobieski arrived to the rescue of Vienna, when besieged by the Turks in 1683.

Kaiffa. A seaport town of Syria, situated on the south side of the Bay of Acre. It was captured by the French in 1799.

Kainardji. In Bulgaria; here a treaty was signed, 1774, between the Turks and Russians, which opened the Black Sea, and gave Crimea to the latter.

Kaiser (from Lat. *Cæsar*). The German word for emperor, which has been so extensively known and used in every language since the year 1871, when William, king of Prussia, was crowned at Versailles, France, as emperor of Germany. Thus was revived the old Teutonic appellation of *kaiser*, which applied formerly, and especially in the Middle Ages, to the German emperors, who inherited this title from the Roman *Cæsars*, themselves succeeded by Charlemagne, who is considered by the Germans as the first emperor of the Vaterland, as William is the latest one.

Kaiserslautern. A fortified town of the palatinate of the Rhine, which belongs to Bavaria, 33 miles west from Spire. It was the scene of much hard fighting between the French and Germans in 1792 and 1793.

Kak Towda (Ind.). A term applied in the East Indies to the fine mold used in making butts for archery practice.

Kalafat. A town of Wallachia, situated on the left bank of the Danube, nearly opposite Widdin. It is strongly fortified, and commands the approach to the Danube. The battle of Citate was fought here on January 6, 1854, and three following days, between the Turks under Omar Pasha and the Russians under Gortschakoff.

Kalai (Fr.). A Turkish fortress; more particularly applied to stockades.

Kalisch, or Kalice. A town of Poland, belonging to Russia, and situated on the frontier of the Prussian territory. The Swedes were defeated by the Poles in its vicinity in 1706; another battle was fought here between the Russians and Saxons in 1818.

Kalispels, or Calispels. See **PEND D'OREILLES**.

Kalmar, or Calmar. A fortified town of Sweden, and the capital of a province, on the sound or strait of the same name, in the Baltic, opposite the island of Oland. In 1897, the treaty of Kalmar, by which Denmark, Norway, and Sweden were united, was signed here.

Kalmucks, or Calmucks. Called by the Tartars *Khalimick* ("renegades"), the largest of the Mongolian peoples, inhabiting large regions of the Chinese, and also Russian dominions. They are divided into four tribes: the Choshots, ruled by descendants of Genghis Khan; the Soongars, in the 17th and the 18th centuries the masters of the other races; oppressed by the Chinese, they migrated in great numbers, in 1758, to Russia, but returned in 1770 to Soongaria; the Derbets, who dwell in the valleys of the Don and Ili; the Torgots, formerly united with the Soongars. The Kalmucks are a nomad, predatory, and warlike race, and pass the greater part of their lives in the saddle.

Kalsa Cutcherry (Ind.). The room of business, where matters pertaining to the army are transacted, and all matters of litigation on that branch of service are determined.

Kaluga. Chief town of the government of the same name in Russia, on the right bank of the Oka. From the 14th to the 18th century, its stronghold was a great protection against the invasions of the Lithuanians, the Tartars of the Great Horde, and especially against the Crimean Tartars. It is at present the residence of Schamyl, the Circassian chief.

Kalunga Fort. In the East Indies; it was attacked unsuccessfully by the company's forces, and Gen. Gillespie killed, October 31, 1814; and again unsuccessfully on November 25. It was evacuated by the Nepalese, November 30, same year.

Kaminiets. A town of Russian Poland, situated on the river Smotriza, and the capital of the government of Podolia. The fortifications of this place were razed in 1812, but have since been rebuilt.

Kamtschatka. A peninsula on the east coast of Asia; was discovered by Morosco, a Cossack chief, and was taken possession of by Russia in 1697.

Kanauts. A term used in India to designate the walls of a canvas tent.

Kangiar. A Turkish sabre, the blade of which is bent contrary to other swords, generally ornamented with diamonds and other precious stones.

Kansas. One of the States of the United States, the thirty-fourth in order of admis-

sion. It lies between 37° and 40° N. lat., and between 25th meridian of long. and the western boundary of the State of Missouri, and is, geographically, the central State of the Union. It was organized as a Territory in 1854, and admitted into the Union January 29, 1861; and though it remained loyal during the civil war, yet many of its inhabitants took the field for the Confederate cause.

Kapigi-Bachi. Officer in charge of the gates of the sultan's palace; a warrior.

Kaponier. See **CAPONIERE**.

Karauls. Military posts; sultan's bodyguards.

Karli-Mesrac. A Turkish lance.

Karmathians. So called from Abu Said Al-Jenabia, surnamed Al-Karmata, a Mohammedan sect which sprang up in the 9th century, and was originally a branch of the Ismailis. The sect was very powerful for a time. They conquered Arabia, Persia, and Syria, which they ruled with a despotic power, and their armies gained great victories of those of the caliphs. In 928 they threatened Bagdad, and in 930, under their leader, Abu Takir, entered Mecca, which was full of pilgrims, when a massacre of the most fearful description ensued, desecrated the holy places, and carried away the supreme palladium, the black stone, which was only restored to Mecca at an immense ransom after twenty years. From that time their power declined, and after the 11th century they are not mentioned in history, although some traces of them still exist at Hasa, their former stronghold.

Karrack. See **CARRACK**.

Kars. A fortified town of Asiatic Turkey, in the province of Armenia, situated on a table-land between 6000 and 7000 feet above the level of the sea. In 1828 it was taken from the Turks by the Russians under Paskievitch. In 1855, its fortifications having been strengthened, it sustained a long siege by the Russians. Their attempt at taking it by storm (September 29) failed, but it was compelled by famine to surrender, November 30. Kars again surrendered to the Russians in 1877, having been captured by storming in a night attack,—one of the most brilliant feats of arms in the annals of history.

Kaschau. A town of Hungary; is situated in the beautiful valley of the Hernad, 180 miles northeast from Pesth. Two battles were fought near Kaschau during the Hungarian revolution, both of which the Austrians gained.

Kaskaskia Indians. A tribe which formerly inhabited Illinois, but are now located with other tribes on the Quapaw agency, Indian Territory. See **INDIANS AND THEIR AGENCIES**.

Kastamouni, or Costambone. A town in Anatolia, Asia Minor. It stands in a dreary hollow, from which rises a solitary rock surmounted by a fortress in ruins. During the Greek empire, the fortress was

in possession of the Comneni. It was taken by Bajazet, retaken by Timour, and lastly, conquered by Mohammed I.

Katan. A Japanese sword, otherwise *cattan*.

Katsbach, or Katsbach. A river in Prussia, in the province of Silesia, near which Gen. Blücher defeated the French under Macdonald and Ney, August 26, 1813. He received the title of Prince of Wahlstatt, the name of a neighboring village.

Kátsena. A town of Central Africa, in the empire of Sokoto. In 1807 the conquering Fúlbes assailed it, and a war was commenced, which lasted for upwards of seven years. The capture of the town was achieved only through its destruction.

Kavass. In Turkey, an armed constable; also a government servant or courier.

Kazan. A town of Russia, capital of the government, and ancient capital of the kingdom of the same name; is situated on the river Kazanka, 4 miles from the north bank of the Volga. It was founded in 1257 by a Tartar tribe, and after various vicissitudes, was made the capital of an independent kingdom of the khan of the Golden Horde, which flourished in the 15th century. In 1552 the Russians, under Ivan the Terrible, carried the town after a bloody siege, and put an end to the existence of the kingdom.

Kecherklechi. Are guards attached to the person of the king of Persia; they are armed with a musket of an extraordinary size and caliber. They were raised and formed into a regular corps about the middle of the 18th century.

Keechies. A small tribe of Indians residing with others on the Wichita Agency, Indian Territory. See INDIANS AND THEIR AGENCIES.

Keen. Sharp; having a fine cutting edge; as, a keen blade.

Keep. To maintain hold upon; not to let go of; not to lose; to retain; as, if we lose the field, we cannot keep the town.

Keep. In ancient military history, a kind of strong tower, which was built in the centre of a castle or fort, to which the besieged retreated, and made their last efforts of defense. In the Norman keeps there appear to have been three stories, the lowest for stores, the second for a guard-room, and the upper, or *solarium*, for the family. The keep was similar to what the classical ancients called the citadel, or inner fort,—a term generally applied to modern fortification on the continent. *King's Keep*, a fort built by King Henry II. in the inner part of Dover Castle is so called.

Keep Off. To deter an enemy from approaching close to the lines or fortifications, by inducing him to suspect a superior force, an ambuscade, or a mine, or by openly gallanting his advanced posts in such a manner as to beat him in detail. Infantry may keep off cavalry by hot firing, or by a bristling hedge of bayonets, when in square.

Keep On. To go forward; to proceed;

to continue to advance; as, to keep on advancing into the enemy's country.

Keep Up. In military movements, is to preserve that regular pace by which a line or column on a march, or in manœuvring, advances towards any given point without any chasms or fluctuations. When a regiment marches by files, it is almost impossible for the rear to keep up. On this account, divisions, sub-divisions, and even sections, are best calculated to preserve a regular depth and continuity of march. Keep up likewise signifies to attend to the interior management and discipline of a corps, so as to prevent the least deviation from established rules and regulations. Thus commanding officers are said to keep up good order and discipline, who, whether present or absent, provide against the least insubordination, etc. *To keep up a heavy fire*, is to play heavy ordnance against a fortified place, or body of men, by a calm and well-directed succession of shot. The term is equally applicable to a steady fire of musketry.

Kehl. A town of Germany, on the Rhine, opposite Strasburg. It is of great importance in a military sense, and was fortified by the French engineer Vauban in the year 1688. This place has often been besieged and taken. It was obstinately defended against the Austrians, who took it in 1797. It was taken by the French the following year, and retained by them till 1814.

Kelat. A town and strong fortress of Afghanistan, 72 miles northeast from Candahar. It was held by the British till their evacuation of the country in 1842.

Kelat. The capital of Beloochistan, India, standing on a hill 6000 feet above the level of the sea. In 1840 this place was taken by the English general Nott, but in the following year the British finally withdrew from it.

Kelso. A town in Scotland, in the county of Roxburgh, situated at the confluence of the Tweed and the Teviot. An old abbey, now in ruins, is the chief object of interest in Kelso. It was founded by David I. in 1128, and was destroyed in 1560, after having sustained great injury at the hands of the English in 1522 and 1545. Kelso is often mentioned in the histories of the border wars.

Kemmendine. A post of the Burmese empire, near Rangoon, memorable for the various contests between the British forces and the natives in 1824.

Kenaians. A numerous tribe of Indians residing in Alaska. They derive their name from the peninsula of Kenai, and are peaceable and self-supporting.

Kenilworth. A small town of Warwickshire, England. The only interest of the place centres in its ruined castle, which stands on a rocky and commanding eminence; it was founded by Geoffrey de Clinton, lord chamberlain to Henry I. It was granted by Henry III. to Simon de Montfort, earl of Leicester, and became the chief rallying-point of the insurgents who sided

with that noble. After his death it held out for six months against the royal forces. The castle of Kenilworth was dismantled by Oliver Cromwell.

Kent. A maritime county of England, forming the southeastern angle of the kingdom, and approaching nearer to the continent than any other part of the kingdom. It was in this county that the Romans first landed when they invaded Britain. It was then inhabited by the Cantii. Kent was the first kingdom of the Heptarchy established by the Saxons in Britain.

Kentucky. One of the Central States of the Mississippi Valley, and the second admitted into the confederacy after the Revolution. It was formerly included in the territory of Virginia, to which it belonged till 1792. Its name, signifying "the dark and bloody ground," is suggestive of its early history, it being the scene of many bloody conflicts between the settlers and Indians, and also the grand battle-ground of the Indians themselves. The most important battle between the Indians and whites took place near Blue Lick Springs, August 19, 1782, the latter numbering 182, and the former about three times that number. After a desperate engagement the Kentuckians were totally routed, with a loss of 60 killed and wounded. The celebrated Col. Boone bore a part and lost a son in this engagement. In the war of 1812 Kentucky was largely and effectively represented, as also in the Mexican war. In the civil war the State at first declared a strict neutrality; but as this condition could not be maintained, after stormy and exciting discussions in its councils, it declared for the Union in November, 1861. As the population was almost equally divided in its sympathy, Kentuckians were to be found fighting in the ranks of both contending armies. The State was the theatre of several hotly contested actions during the civil war, and suffered considerably during that trying period.

Kerana. A long trumpet, similar in shape and size to the speaking-trumpet. The Persians use it whenever they wish to make any extraordinary noise, and they frequently blow it with hautboys, kettle-drums, and other instruments, at retreat or sunset, and two hours after midnight.

Kerman, or Sirjan. The capital of a province of the same name in Persia, situated about 360 miles southeast from Ispahan. In 1794, after a brave defense, this city was taken by Aga Mohammed Khan, and given up to plunder for three successive months. It has never recovered from the effects of this great disaster.

Kern (Ir. *cearn*). A soldier. The Irish infantry were formerly distinguished by this appellation. The men in those days were armed with a sword and a dart or javelin, which was tied to a small cord, so that after they had thrown it at the enemy they could instantly recover it, and use it in any way they thought proper. The javelin was

called *skene*, which is also the Irish for a knife.

Kertch (anc. *Panticapæum*). A town of Russia, in the government of Taurida, on the coast of the Crimea. It was colonized in 500 B.C. by the Milesians, and about 50 B.C. it became part of the Roman empire; and in 375 A.D. it fell into the hands of the Huns. In 1280 it was occupied by the Genoese, who were driven out by the Turks in 1473. It was seized by the Russians in 1771, and formally ceded to them in 1774. In May, 1855, it was taken by the allied French and English during the Crimean war, on which occasion it was ruthlessly plundered by the soldiery.

Ket's Rebellion. A revolt which occurred in England in July, 1549, instigated by William Ket, a tanner, of Norfolk. He demanded the abolition of inclosures and the dismissal of evil counselors. The insurgents amounted to 20,000 men, but were quickly defeated by the Earl of Warwick, whose troops killed more than 200 of the insurgents.

Kettle-drum. A drum formed by stretching vellum over the circular edge of a hemispherical vessel of brass or copper. This instrument, which gives forth a sharp, ringing sound, is used in Europe by regiments of cavalry and horse-artillery in lieu of the ordinary cylindrical drum, which would, from its shape, be inconvenient on horseback. Kettle-drums are not used in the U. S. military service.

Kettle-drum Cart. A four-wheel carriage drawn by four horses, which was used exclusively by the British artillery as a pageant. The ordnance flag was painted on the fore part, and the drummer, with two kettle-drums, was seated, as in a chair of state, on the back part. This cart, which is finely engraved and richly gilt, has not been in the field since 1743, when the king was present. It is at present kept in the Tower of London.

Kettle-drummer. One who plays on a kettle-drum.

Kettle-hat. A cap of iron worn by knights in the Middle Ages.

Key. In artillery carriages, is a bolt used to secure cap squares and for analogous purposes.

Key of a Position or Country. A point the possession of which gives the control of that position or country.

Key-chain. A chain attached to the key to prevent it from being lost.

Key-plates. See **ORDNANCE, CARRIAGES FOR, THE CAISSON.**

Keyserlicks, or Imperialists. The Austrian troops are frequently called so. The term was indeed common among the British soldiers, when they did duty with the Austrians, and invaded France in 1794.

Khaibar. A town of Arabia, the capital of an independent Jewish territory, 110 miles north from Medina. In 628 it was taken by Mohammed, who had received

from a Jewess of the town the poisoned egg which ultimately cost him his life.

Khan. A title of Mongolian or Tartar sovereigns and lords. A *khanate* is a principality. *Khagan* means "khan of khans," but has seldom been applied. The word *khan* is probably of the same origin as king.

Khedive. A title, said to signify a position inferior to an absolute sovereign, but superior to a mere viceroy, which was given to the viceroy of Egypt, Ismail Pasha, by the sultan of Turkey in 1867.

Kheet (*Ind.*). A fortified city, which is 4 or more coss, or 8 English miles, in length and breadth, and which does not exceed 8 coss, or 16 English miles.

Khelat. A hill fortress of considerable strength in the territory of Afghanistan, which was gallantly captured by the British troops in 1839.

Kherson. An ancient Dorian colony, which came under the sway of the great Mithridates about 120 B.C., and afterwards of that of Rome in 80. It continued important, and its possession was long disputed by the Russians and Greeks. It was taken by Vladimir, grand duke of Russia, in 988. The city was destroyed by the Lithuanians; and the Turks found it deserted when they took possession of the Crimea in 1475.

Khiva (anc. *Chorasmia*), **Khaurezm**, **Kharasm**, or **Urgunge**. A khanate of Turkestan, in Central Asia. In ancient times it was nominally subject to the Selucids; subsequently it formed part of the kingdoms of Bactria, Parthia, Persia, and the Caliphate, and became an independent monarchy in 1092 under a Seljuk dynasty. The Khivans, or as they were then called, the Khaurezmians, after conquering the whole of Persia and Afghanistan, were obliged to succumb to the Moguls, under Genghis Khan, in 1221. In 1370 it came into the hands of Timur. Timur's descendants were subdued in 1511 by Shahy Beg, chief of the Uzbeks, a Turkish tribe, and his successors still rule over Khiva. In 1717, Peter the Great attempted to conquer it, but his army was totally defeated; the attempt was renewed in 1839 by the czar Nicholas, with the same result; the greater part of the Russian army perished in the desert. From 1873 to 1875, however, it was continually invaded by the armies of Russia, who in the latter year occupied a portion of the principality, which is now ruled by the Russian government under the name of the Trans-Caspian Territory.

Khodadad Sircar (*Ind.*). The government or ruler blessed or beloved of God; it was a title assumed by Tipoo Sahib, the sovereign of the kingdom of Mysore, who fell in defense of his capital, Seringapatam, when it was stormed, May 4, 1799, by the British forces under Lieut.-Gen. Harris.

Khoi. A walled town of Persia, province of Azerbaijan, on a tributary of the Khar. In the plain of Khoi, Shah Ismael signally defeated the Turks under Selim I. in 1614.

Khurd-Cabul. A village of Afghanistan, situated 16 miles southeast of Cabul. Here, in 1841, the British troops retreating from Cabul to Jelalabad became totally disorganized, and were murdered without resistance by the Afghans; and here, in 1842, Gen. Pollock encamped after the decisive defeat of the Afghans at Terzeen.

Khyber Pass. The most practicable of all the openings through the Khyber Mountains, is the only one by which cannon can be conveyed between the plain of Peshawur, on the right bank of the upper Indus, and the plain of Jelalabad, in Northern Afghanistan. It is 30 miles in length, being here and there merely a narrow ravine between almost perpendicular rocks of at least 600 feet in height. It may be said to have been the key of the adjacent regions in either direction from the days of Alexander the Great to the Afghan wars of 1839-42. Here a British army, on its retreat from Cabul in January, 1842, was absolutely annihilated.

Kibee. A flaw produced in the bore of a gun by a shot striking against it.

Kick. To recoil;—said of a musket, piece of ordnance, and the like.

Kickapoos. A tribe of Indians who formerly lived on the Wisconsin River, and were for a long time hostile to the white settlers, but after Wayne's victory over the tribes in Ohio in 1794 submitted, and concluded a treaty of peace in 1795. In 1811 and 1812, however, they again renewed hostilities, and attacked Fort Harrison in the latter year. Being repulsed, they surprised and murdered 20 persons at the mouth of White River. For this and similar atrocities they were punished by the burning of some of their villages. After a desultory warfare, treaties of peace were again concluded with them, and after the treaty of 1819 they sold their lands and moved beyond the Mississippi River. A few settled down to agriculture, and their descendants now exhibit considerable indications of civilization; but the greater number roamed over the country committing depredations. Some of them are now settled on the Kansas agency, Kansas, and others on the Sac and Fox agency, in Indian Territory. See INDIANS AND THEIR AGENCIES.

Kidnapper. Parties were formerly so called, who by improper means decoyed the unwary into the army.

Kiel. Chief town of Holstein, a seaport, and a member of the Hanseatic League in 1300. By a treaty between Great Britain, Sweden, and Denmark, signed here January 14, 1814, Norway was ceded to Sweden. An extraordinary assembly of the revolted provinces, Schleswig and Holstein, met here September 9, 1860. By the convention of Gastein between Austria and Prussia, August 14, 1865, the former was to govern Holstein, but Kiel to be held by Prussia as a German federal port. This was annulled in 1866 by the issue of the war.

Kiev, or Kief. The chief town of the

government of that name, on the west bank of the Dnieper; is one of the oldest of the Russian towns, and was formerly the capital. In 864 it was taken from the Khazars by two Norman chiefs, companions of Ruric, and conquered from them by Oleg, Ruric's successor, who made it his capital. It was nearly destroyed by Batu, khan of Kiptchak. In the 14th century it was seized by Gedimin, grand duke of Lithuania, and annexed to Poland in 1569, but in 1686 was restored to Russia.

Kilcullen. In Kildare, Ireland. Here a large body of the insurgent Irish defeated the British forces commanded by Gen. Dundas, May 23, 1798. The general in a subsequent engagement overthrew the rebels near Kilcullen bridge, when 800 were slain.

Kildare. A county of Ireland, in the province of Leinster. The insurrection in Ireland which swelled into the rebellion, commenced in Kildare, May 23, 1798. On that night Lieut. Gifford of Dublin, and a number of other gentlemen, were murdered by the insurgents. This rebellion was quelled in 1799.

Kilkenny. Capital of a county of the same name in Ireland, on the Nore. After a siege the town surrendered to Cromwell, March 28, 1650, on honorable terms.

Killa (*Ind.*). A castle, fort, or fortress.

Killadar. The governor, or commandant of a fort in India.

Killala. A small seaport town of Ireland, in the county of Mayo. It was invaded by a French force landing from three frigates, under Gen. Humbert, August 22, 1798. The invaders were joined by the Irish insurgents, and the battles of Castlebar and Collooney followed; and the French were defeated at Ballinamuck, September 8 of the same year.

Killaloe. A town of Ireland, in the county Clare, 12 miles northeast of Limerick. This town was long the royal seat of the O'Briens; and at Kincora, about a mile to the north, are pointed out some remains of the residence. At Killaloe, in 1691, Gen. Sarsfield intercepted the artillery of William III. on its way to Limerick.

Killise. The groove in a cross-bow.

Killiecrankie. A famous pass through the Grampian Mountains, in Perthshire, Scotland, 15 miles northwest of Dunkeld. At the northwest extremity of this pass a battle was fought in 1689, between the revolutionary army under Gen. Mackay, and the royalists under J. C. Graham of Claverhouse, viscount Dundee, in which the former was defeated.

Kilmainham Hospital. An asylum in Dublin, Ireland, for aged and disabled soldiers. It was founded by Arthur, earl of Granard, marshal-general of the army in Ireland, 1675. The appointments to this place are in the gift of the commander-in-chief of the army, who selects them from the old half-pay officers. The expense of the institution to the country is £8000 per annum.

Kilmallock. A town of Ireland, in the

county Limerick. It was invested by the Irish forces in 1598, but the siege was raised by the Duke of Ormond. There was much fighting done here in 1641 and 1642. Kilmallock police barrack was attacked by 200 armed Fenians on March 5, 1867; the barrack was defended for three hours by 14 police constables, who finally drove off the Fenians, with loss, by a sally.

Kilsyth. A village of Scotland, in Stirlingshire, 18 miles southwest from Stirling. Montrose gained a victory over the Covenanters, commanded by Gen. Baillie, near Kilsyth in 1637.

Kinburn. A fort at the confluence of the rivers Bug and Dnieper, which was taken by the English and French, October 17, 1855. Three floating French batteries, on the principle of horizontal shell-firing, said to be the invention of the emperor, were very effective. On October 18, the Russians blew up Oczakoff, a fort opposite.

Kindle. In a military sense, to kindle is to excite to arms; to excite military ardor.

Kineton. A town of England, in Warwickshire, 11 miles southeast from Warwick, in the vicinity of which the famous battle of Edgehill was fought between the royalist and Parliamentary armies in 1642.

Kinghorn. A small burgh of Scotland, in the county of Fife, situated on the Frith of Forth. In early Scottish history it was a place of importance. Here Macbeth is said to have routed the Northmen.

King-of-Arms, or King-at-Arms. The principal herald of England was at first designated king of the heralds, a title exchanged for king-of-arms about the reign of Henry IV. There are four kings-of-arms in England, named respectively Garter, Clarenceux, Norroy, and Bath; but the first three only are members of the College of Arms. Scotland has a heraldic officer called Lyon king-of-arms, or Lord Lyon king-at-arms. Ireland has one king-of-arms, named Ulster. See **HERALD**.

King's Mountain. A range of mountains in North and South Carolina, about 16 miles from north to south, with several spurs spreading laterally. About a mile and a half south of the North Carolina line, in this range, on October 7, 1780, the British forces about 1100 strong, under Lieut.-Col. Ferguson, were surprised and attacked by the American militia under Cols. Cleveland, Shelby, and Campbell, and, after an obstinate and bloody contest, their leader being among the slain, the British were made prisoners.

Kingsland. A parish of England, in Herefordshire, 4 miles west from Leominster. The battle of Mortimer's Cross, which fixed Edward IV. on the throne, was fought here in 1461.

Kingston. A city in Ulster Co., N. Y., 90 miles north of New York City. It was burnt by a British force under Sir Henry Clinton, October 7, 1777; it was afterwards rebuilt and incorporated as a village in 1805.

Kingston. A village and township of Luzerne Co., Pa. In this township the massacre of Wyoming took place, on July 8, 1778. See WYOMING VALLEY.

Kingston-upon-Thames. A town in Surrey, England, on the Thames, 10 miles southwest of London. The first armed force of the Parliamentary army assembled in this town, and here the last attempt in favor of Charles I. was made.

Kinsale. A town of Ireland, in the county of Cork. This place was taken by the Spaniards in 1601, and in 1608 King James II. landed here.

Kioeg. A seaport of Denmark, near Copenhagen, where the Danes in 1807 were signally defeated by the British.

Kiowas. A warlike and powerful tribe of Indians, who formerly roamed over Kansas, Colorado, and Northern Texas, robbing and murdering settlers. They are now located, to the number of about 2000, with the Comanches, on a reservation in Indian Territory. In 1870, in violation of the terms of their treaty, they made a raid into Texas, where they killed several people. For this two of their principal chiefs, Satantá and Big Tree, were sentenced to be hung; but their sentence was commuted to imprisonment for life, and they were subsequently pardoned. Of late years they have been peaceable.

Kiptchak, or Kipchak. A term which, in the Middle Ages, designated that vast territory stretching north of the Caspian Sea, from the Don to Turkestan, and occupied by the Kumans and Polovises. This tract formed one of the four empires into which the huge dominion of Genghis Khan was divided, and was the portion of his eldest son Jüjy, under whose son and successor, Batú Khan, it became the terror of Western Europe, and held Russia in iron subjection from 1286 till 1362. Batú also conquered Bulgaria, and invaded Hungary, Austria, and Eastern Germany, but made no permanent conquests in this direction. This extensive empire was dismembered towards the end of the 15th century, and gave rise to the khanates of Kazan, Astrakhan, and Crim-Tartary. The Mongols of Kiptchak were also known as the Golden Horde.

Kirkee. A village of Hindostan, near Poona, in the Deccan, memorable for a battle fought there in 1817 between the Anglo-Indian forces and the Mahrattas, who, although greatly superior in number, were compelled to retreat with severe loss.

Kisselbaches. Soldiers are so called in India.

Kissingen. A town of Bavaria, on the Saale, 80 miles north-northeast of Würzburg. It was taken by storm on July 10, 1866, after a severe engagement between the Bavarians and Prussians, in which the latter were victorious.

Kit. A small wooden pail or bucket, wherewith boats are bailed out.

Kit. In military language, the equipment

in necessities, such as shirts, boots, brushes, etc., of a soldier, but not applicable to his uniform, arms, or accoutrements.

Kitchen. The building or room used by soldiers for cooking purposes.

Klagenfurth, or Clagenfurt. A town of Austria, the capital of the duchy of Carinthia, on the Glan. In 1809 the French entered this place, and destroyed the fortifications which surrounded it.

Klamaths, or Clamets. A tribe of Northern California Indians, who lived in Southern Oregon and Northern California, near Klamath Lake, and on Klamath and Rogue Rivers. They are generally peaceable, and number about 700. They are now located on a reservation, and have an agency in Southern Oregon known by their name.

Klicket. A small gate in a palisade for the purpose of rallying forth.

Kliketats, or Kliktats. A tribe of Indians who resided in Washington Territory, in the country between the Cascade Range and the Columbia River, north of the Dalles. They were reduced to complete subjection in 1855, and are now located with kipedred tribes to the number of about 4000, on the Yakima reservation, Washington Territory.

Klinket. A term used in fortification, signifying a small postern or gate in a palisade.

Knapsack. A bag of canvas or akin, containing a soldier's necessities, and worn suspended by straps between his shoulders. Those used in the British army are ordinarily of black painted canvas, but a new sort of knapsack, called the valise equipment, has been issued to some regiments. Some other nations, as the Swiss, make them of thick goat-skin, dressed with the hair on.

Knight. From the Saxon *cnicht*, a servant or attendant, was originally a man-at-arms bound to the performance of certain duties, among others to attend his sovereign or feudal superior on horseback in time of war. The institution of knighthood, as conferred by investiture, and with certain oaths and ceremonies, arose gradually throughout Europe as an adjunct of the feudal system. The character of the knight was at once military and religious; the defense of the Holy Sepulchre and the protection of pilgrims being the objects to which, in early times of the institution, he especially devoted himself. The system of knight-service introduced into England by William the Conqueror empowered the king, or even a superior lord who was a subject, to compel every holder of a certain extent of land, called a knight's fee, to become a member of the knightly order; his investiture being accounted proof that he possessed the requisite knightly arms, and was sufficiently trained in their use. After the long war between France and England, it became the practice for the sovereign to receive money compensations from subjects who were unwilling to receive knighthood, a system out of which grew a series of grievances, leading

eventually to the total abolition of knight-service in the reign of Charles II. Since the abolition of knight-service, knighthood has been conferred, without any regard to property, as a mark of the sovereign's esteem, or a reward for services of any kind, civil or military. The ceremonies practiced in conferring knighthood have varied at different periods. In general, some religious ceremonies were performed, the sword and spurs were bound on the candidate; after which a blow was dealt him on the cheek or shoulder, as the last affront which he was to receive unrequited. He then took an oath to protect the distressed, maintain right against might, and never by word or deed to stain his character as a knight and a Christian. A knight might be degraded for the infringement of any part of his oath, in which case his spurs were chopped off with a hatchet, his sword was broken, his escutcheon reversed, and some religious observances were added, during which each piece of armor was taken off in succession, and cast from the recreant knight. For the different orders of knighthood, see separate articles, under their appropriate headings, in this work.

Knight, To. To dub or create a knight, which in modern times is done by the sovereign, who gives the person kneeling a blow with a sword, and says, "Rise, Sir ———."

Knight Baronet, or Baronet. A dignity or degree of honor next below a baron and above a knight, having precedency of all orders of knights except those of the garter, and being the only knighthood that is hereditary. The order was founded by James I. in 1611, and is given by patent. The word, however, in the sense of *lesser baron*, was in use long before the time of James I.

Knightage. The body of knights taken collectively.

Knight-bachelor. One of the lowest order of knights, who were expected to remain unmarried until they had gained some renown by their achievements.

Knight-banneret. A knight who carried a banner, who possessed fiefs to a greater amount than the knight-bachelor, and who was obliged to serve in war with a greater number of attendants. He was created by the sovereign in person on the field of battle.

Knight-errant. A wandering knight; a knight who traveled in search of adventures, for the purpose of exhibiting military skill, prowess, and generosity.

Knight-errantry. The practice of wandering in quest of adventures; the manners of wandering knights; a quixotic or romantic adventure or scheme.

Knight-erratic. Pertaining to knight-errantry.

Knighthood. Originally a military distinction, came, in the 16th century, to be occasionally conferred on civilians, as a reward for valuable services rendered to the crown or community. The first civil knight in England was Sir William Walworth, lord

mayor of London, who won that distinction by slaying the rebel Wat Tyler in presence of the king. In recent times, it has been bestowed at least as often on scholars, lawyers, artists, or citizens, as on soldiers, and in many cases for no weightier service than carrying a congratulatory address to court.

Knighthood. The character, dignity, or condition of a knight.

Knighthiness. Duties of a knight.

Knighthly. Pertaining to a knight; becoming a knight; as, a knightly combat.

Knights, Military. An institution of military knights at Windsor, England, formerly called "Poor Knights," which owes its origin to Edward III., and is a provision for a limited number of old officers. These officers consist of a governor and 12 knights on the upper foundation, and 5 on the lower, together 18, and are composed of officers selected from every grade, from a colonel to a subaltern, chiefly veterans, or on half-pay. They are allowed three rooms each in Windsor Palace, and 2 shillings per diem for their sustenance, besides other small allowances.

Knights of St. George. See GARTER, ORDER OF THE.

Knights Templar. See TEMPLAR, KNIGHTS.

Knight-service. A tenure of lands held by knights on condition of performing military service. It was abolished in the time of Charles II. of England.

Knob of a Cascabel. See CASCABEL.

Knot. A twist or loop in a rope or cord, so made that the motion of one piece of the line over the other shall be stopped. The knot owes its power of passive resistance to the friction of the rope. The three elementary knots, which every one should know, are the *timber-hitch*, the *bow-line*, and the *clove-hitch*.

The virtues of the *timber-hitch* are, that, so long as the strain upon it is kept up, it will never give; when the strain is taken off, it is cast loose immediately.

The *bow-line* makes a knot difficult to undo; with it the ends of two strings are tied together, or a loop made at the end of a single piece of string. For slip nooses, use the bowline to make the draw-loop.

The *clove-hitch* binds with excessive force, and by it, and it alone, can a weight be hung to a smooth pole, as to a tent-pole. A kind of double *clove-hitch* is generally used, but the simple one suffices, and is more easily recollected.

There are other knots very useful in the artillery service and indispensable aboard ship, viz.: *single knot*, *weaver's knot*, *figure-eight knot*, *artificer's knot*, *mooring knots*, *hitches*, *capstan*, or *prolonge knot*, *square knot*, *loops*, *becker knot*, and *anchor knot*.

Knot, Shoulder. See SHOULDER-KNOT.

Knout. A scourge composed of many thongs of skin, plaited, and interwoven with wire, which was till lately the favorite instrument of punishment in Russia for all classes and degrees of criminals. The of-

fender was tied to two stakes, stripped, and received on the back the specified number of lashes; 100 or 120 were equivalent to sentence of death, but in many cases the victim died under the operation long before this number was completed. This punishment is at present only inflicted upon ordinary criminals, such as incendiaries or assassins. It is no longer in use in the army, except when a soldier is dismissed for ill conduct, in which case 8 to 10 lashes are given, in order to disgrace the soldier, rather than punish him.

Kolin. A town of Bohemia, on the left bank of the Elbe. Here the Austrians under Daun defeated the Prussians under Frederick the Great, June 18, 1757.

Koloshes. The Russian name for the Indians of the coast of Alaska.

Komom. See COMORN.

Koniagas, or Kadiaks. The names by which the various tribes of aborigines living along the coast of Alaska for over 1500 miles, are known.

Konieh (anc. *Iconium*). A town of Asiatic Turkey, the capital of the province of Karamania, Asia Minor. Here the Turkish army was defeated by the pasha of Egypt, after a long, sanguinary fight, December 21, 1882. See *ICONIUM*.

Königrätz. A town and fortress of Bohemia, on the left bank of the Elbe. On July 2, 1866, the Austrians under Gen. Benedek were signally defeated with a loss of 40,000 men by the Prussians under King William, at Sadowa, near Königrätz.

Königsberg. A fortified city of Prussia, and former capital of the kingdom, is situated on both banks of the Pregel, and on an island in that river, 4 miles from its entrance into the Frisch Haff. It was founded in 1255, and in 1365 became a member of the Hanseatic League; in 1626, it was surrounded with walls; and in 1657, received a strong additional defense in the citadel of Friedrichsburg. It suffered much during the Seven Years' War by the occupation of the Russians from 1758 to 1764; and also from the French, who entered it in 1807, after the battle of Friedland.

Königstein. A town of Germany, in Saxony, 17 miles southeast of Dresden, on the left bank of the Elbe. It has a fortress, situated on a rock nearly 450 feet high, which is one of the few in Europe that never yet were taken. The royal treasures have usually been deposited here during war.

Koom, or Kum. A town of Persia, in the province of Irak-Ajemee. It was destroyed by the Afghans in 1722.

Kootenais, Kontenays, Cottonois, Cou-tanias, or Flatbows. A tribe of Indians who formerly resided wholly in British Columbia, but some of them are now located in Washington, Idaho, and Montana Territories. They are generally peaceable and self-supporting, and have made some progress in civilization. About 400 of them reside at the Flathead Agency, Montana.

Koreish. An Arab tribe which had the charge of the Caaba, or sacred stone of Mecca, and strenuously opposed the pretensions of Mohammed. It was defeated by him and his adherents, 623-30.

Kossacks. See COSSACKS.

Kossova. A town of European Turkey, 8 miles northeast from Pristina. A battle was fought near this place in 1889 between the Turks and Serbs. The latter were defeated, and the king slain.

Koszegh, or Guns. See GUNS.

Kotah. The chief town of a protected state of the same name; is situated in Rajpootana, India, on the right bank of the Chumbul. In 1857, notwithstanding the fidelity of the rajah to the British government, Kotah fell under the power of the mutineers, remaining in their possession until March 30, 1858, when it was stormed by Gen. Roberts.

Kot-duffadar. See DUFFADAR, KOT.

Koul. A soldier belonging to a noble corps in Persia.

Kouler-Agasi. A distinguished military character in Persia, who has the command of a body of men called *Kouls*. He is usually governor of a considerable province.

Kouls. The third corps of the king of Persia's household troops. The *Kouls* are men of note and rank; no person can arrive at any considerable post or situation in Persia who has not served among the *Kouls*.

Kovno. Capital of the government of the same name in European Russia, near the confluence of the Vilja and the Niemen, was founded in the 10th century, and was the scene of many bloody conflicts between the Teutonic knights and Poles during the 14th and 15th centuries.

Kraal (probably from the language of the Hottentots). In South Africa, a village; a collection of huts; sometimes a single hut. This term is applied to the villages and military camps of the Zulus.

Krasnoe. A Russian village, 30 miles southwest of Smolensk, near which the French, in the retreat of 1812, lost, during three successive days, 25,000 men, several thousand prisoners, and 25 pieces of cannon.

Kreuznach. A town of Rhenish Prussia, on the Nahe, 40 miles south-southeast of Coblenz. This place was stormed by Gustavus Adolphus in 1632.

Kris, or Crease. A dagger or poniard, the universal weapon of the inhabitants of the Malayan Archipelago. It is made of many different forms, short or long, straight or crooked. The hilt and scabbard are often much ornamented. Men of all ranks wear this weapon; and those of high rank, when in full dress, sometimes carry three or four. In Java women sometimes wear it.

Krupp Gun. The metal used in these celebrated guns is cast steel, a composition of puddled steel and wrought iron. The wrought iron is obtained from the best hematite ores of Europe, the puddled steel from the spathic ore of Siegen, in the immediate

vicinity of the works. The proportions of each metal, the details of their preparation, as well as certain ingredients guessed at but not known, remain a secret with the manufacturers. Manganese in small quantity is supposed to be present and to exercise an important influence. The result is a metal equal in elasticity and tensile strength to the best English steel, the excellent quality of which is largely due to "oil tempering," a process entirely omitted in the Krupp gun. The ingots forming the different parts of the gun are cast in cylindrical iron molds, an operation requiring the greatest care to prevent the imprisonment of air or other gases in the casting,—a defect which the tenacious character of the metal renders fatal. Subsequent hammering only increases the trouble by involving a larger area. As soon as the ingot is hard enough to permit handling it is removed from the mold and cooled slowly in ashes. It is next brought to a working heat in a furnace, placed under a steam-hammer weighing from 1 to 50 tons, according to the size of the ingot, and drawn out to the required length and thickness, when it is again buried in ashes and gradually annealed to remove the tensions induced by hammering. From the rough ingot thus prepared the tube forming the barrel is made directly by boring, turning, and rifling. The ingots intended for hoops, trunnion bands, etc., are cut up into short lengths, which are formed into rings without weld by being split through the centre within a certain distance of the ends, after which the slit is gradually widened to a circle by swaging. The parts when finished are carefully annealed.

The Krupp gun consists of a central tube or barrel, comprising the greater mass of the gun, and a series of encircling hoops. The tube has a thickness of about eight-tenths of the caliber from a point over the front of the charge to the termination of the rings or hoops, whence it is conical, tapering to a thickness of about half the caliber at the muzzle. From the seat of the charge breechwards the tube thickens rapidly by a series of steps to a cylinder about $1\frac{1}{2}$ calibers thick. The hoops overlie the tube from the cylinder in rear to the base of the cone in front, covering about half the total length of the tube. The hoops are put on in layers, the number of layers being determined by the size of the gun. The 6-inch gun has one, the 8- and 9-inch two, and the higher calibers have three layers of hoops. The hoops are shrunk on at black heat, the different layers being held in place by small key-rings.

The rifling for Krupp guns is polygrooved, the twist uniform, the grooves being gradually narrowed towards the muzzle for the suppression of windage. The chamber in which the shot and charge rest is a little larger than the bore, though they coincide at the bottom. This makes the passage of the projectile into the bore direct and prevents the abrasion which would occur if

tilted upwards in leaving its seat. Moreover, the shot is "centred"—that is, has its axis in the axis of the bore—from its entry into the gun.

The breech-mechanism is essentially that of Broadwell. The breech is closed on the "sliding block" principle. Through the cylindrical part of the barrel in rear of the rings, from one side to the other, a slot is cut in which the breech-block slides horizontally, alternately exposing and closing the rear of the chamber. The block is run in and out by an attached screw, which works partly in the upper wall of the slot. The motion of the block is governed by guides in the upper and lower walls of the slot slightly inclined from the perpendicular to the axis of the piece. The rear of the slot is so cut that the block is wedged firmly against it when it is home. The block is locked in this position by a large screw, which catches in certain threads cut on the rear wall of the slot. The block is furnished with an "indurator plate," a disk of hardened steel, which is set in its face to receive the direct action of the powder gases. The vent is in the axis of the gun through the block. The gas-check used is the *Broadwell ring* (which see). The powder for all the large guns is the *prismatic*. (See GUN-POWDER.) Both steel and cast-iron projectiles are used. The steel projectiles for armor piercing have their points water-tempered. Rotation being communicated by compression, the projectiles belong to the soft-jacketed class. The projectile is turned smooth in a lathe, pickled in dilute acid, and then put in sal-ammoniac to remove oil. It is next galvanized by immersion in molten zinc, then immersed in lead, and afterwards a heavy lead jacket is cast on it, which is turned down, leaving several prominent rings to facilitate compression into the grooves. In late years Herr Krupp has adopted for his large guns the American system of projectiles, having soft metal expanding sabots attached to the base, with a centring ring in front.

Krupp guns range in size from small field-pieces to a gun weighing 72 tons. The field pieces manufactured number several thousand. They form the official equipment of the German army, and contributed much to German success in the Franco-Prussian war. The large guns, comprising 6-, 7-, 8-, 9-, 10-, 11-, and 12-inch guns, have been made in large numbers, and have found a ready sale in Germany, Russia, and Turkey.

The largest guns are a 14-inch gun weighing 56 tons, and a 15 $\frac{1}{2}$ -inch weighing 72 tons. (See CANNON.) Herr Krupp is also a large manufacturer of gun-carriages of all kinds. His partiality for steel has led him to use it almost exclusively in his constructions. He has inherited likewise the aversion of the great Borsig for *welding*; and a noticeable feature of his guns is an absence of any *weld*. The "coil" principle, so well adapted to develop tangential strength, is also omitted,

the character of the metal being relied upon to resist strains "across the grain."

Perhaps the most novel piece of ordnance of modern times is Krupp's *non-recoiling shield gun*. This gun is made with an enlargement around the muzzle in the shape of a large ball, which is held in a socket formed in a heavy armored shield protecting the gun in front, the arrangement giving a veritable ball-and-socket joint, about which the gun is elevated and traversed. On ship-board or in a fortification the shield would form a part of the armor or scarp wall. A narrow slit above the ball is used in pointing by the gunner, who for this purpose sits astride of the gun. The problem solved by this unique arrangement is the entire suppression of recoil, the strain being absorbed by the massive shield. In the late experiments at Mappen, 1879, the triumphs of Krupp guns culminated in the performances of this novel piece of ordnance. Its action was satisfactory in every respect, and so slight was the shock communicated to the gun that the gunner did not deem it necessary to dismount, but kept his seat astride of it during the firing.

Krupp's Steel Works. On account of the wide-spread reputation which the steel produced in the great works of Krupp at Essen, in Rhenish Prussia, has obtained, it is necessary that these works should receive a brief notice. They were founded by Friedrich Krupp in 1810, and were continued by his sons after his death in 1826. For the last fifty years they have been increasing annually from one-sixth to one-third in size, until now they cover about 500 acres, and give employment to about 20,000 persons, including those engaged in building, and in the mines and smelting-houses. For large metallurgical works Essen is favorably situated, being in the centre of a coal-bearing area, where coal of the best quality can be procured cheaply, and near mines of manganiferous iron ore, which has been found excellently adapted for the manufacture of steel; but it is believed that the admirable organization of every part of his manufactory has conduced as much as anything to the great success of Krupp. The articles manufactured consist principally of rails, tires, crank-axles, shafts, mining pump-rods, gun-carriages and guns, the proportion of ordnance being about two-fifths of the whole. Guns have been made at Essen for the Prussians, Austrians, Belgians, Dutch, Italians, Turks, Japanese, and also for the English, although not directly ordered by the government. Since 1872 a field-gun invented by Krupp has been adopted by the Prussian government, and supplied to the whole army. The establishment possesses 286 steam-engines from 2 to 1000 horse-power, 1100 furnaces of various kinds, 71 steam-hammers, 284 smith's forges, 275 coke-ovens, and 1056 planing, cutting, and boring machines. It burns over 1000 tons of coal daily, and has over 11,000 gas-

burners, consuming in twenty-four hours 400,000 cubic feet of gas. It has, besides, a complete telegraph system, 800 cars, 15 locomotives, 83 miles of railway, over 8000 dwelling-houses, hospitals, chemical laboratory, a photographic and lithographic establishment, over 400 mines, 11 blast-furnaces and several smelting-houses which produce annually about 20,000 tons of pig-iron. These works have already produced over 18,000 heavy guns.

Kshatriya. The second or military caste in the social system of the Brahmanical Hindus.

Ku-Klux-Klan. A secret organization of ex-Confederate soldiers, who, for several years after the close of the civil war, by their murders and other crimes disturbed the tranquillity of the Southern States. Their victims were chiefly freedmen, and persons suspected of favoring the policy of the government. Stringent measures were taken against them by Congress in 1871, and they soon after ceased their disturbances.

Kul. The Turkish word for slave to the prince. The grand vizier, the bachas, the beiglerbeys, and all persons who receive pay or subsistence from situations dependent upon the crown, are so called. This title is in high estimation among the Turkish military, as it authorizes all who are invested with it to insult, strike, and otherwise ill use the common people, without being responsible for the most flagrant breach of humanity.

Kulm. A small village of Bohemia, 16 miles north-northwest of Leitmeritz, was the scene of two bloody conflicts between the French and allied Russian-Austrian armies on August 29-30, 1813. The French, numbering 80,000 men, were commanded by Gen. Vandamme; the Russians, during the first day's conflict, were 17,000, and were commanded by Gen. Ostermann-Tolstoi. During the night, the latter were heavily reinforced, and on the second day Barclay de Tolly assumed the command with 60,000 troops. The result was the complete wreck of the French army, which lost in these two days little short of 20,000 men, while the allies did not lose half of that number.

Kunneradorf. See CUNNERSDORF.

Kunobitsa. In the Balkan, where John Hunniades, the Hungarian, defeated the Turks, December 24, 1443.

Kupele. Straits so called in India, through which the Ganges disembogues itself into Hindostan. They are distant from Delhi about 80 leagues. It was at these straits that the East Indians made some show of resistance when the famous Tamerlane (Timur) invaded India. The field of this victory is the most distant point of that emperor's conquest in India, and on the globe.

Kurrol (Ind.). The advanced-guard of a main army.

Kurtchi. A militia is so called in Persia. It consists of one body of cavalry, which is composed of the first nobility of the kingdom, and of the lineal descendants of the

Turkish conquerors, who placed Ismael Sophi on the throne. They wear a red turban of twelve folds, which is made of particular stuff. This turban was originally given them by Ismael, in consideration of their attachment to the religion and family of Ali. In consequence of their wearing this turban, the Persians are always called by the Tusks *kitilbaschi*, or red-heads. The Kurtchi form a body of nearly 18,000 men.

Kurtchi-baschi. The chief or commanding officer of the Kurtchi. This was formerly the most distinguished situation in the kingdom, and the authority annexed to it was equal to what the constable of France originally possessed. At present his power does not extend beyond the Kurtchis.

Kush-bash (*Ind.*). Persons who enjoy lands rent free, upon condition of serving the government in a military capacity when called upon.

Kustrin, or Custrin. A fortified town of Prussia, in the province of Brandenburg, at the union of the Wartha with the Oder, 48 miles east from Berlin. In 1758 it was bombarded by the Russians, and in 1806 taken by the French. It has a large powder-magazine.

Kutchin. A family of Alaska Indians, which is divided into a number of petty tribes, who occupy the valley of the Yukon River.

Kyanizing. A process for preserving timber from decay,—so named from the inventor Kyan. The process consists in saturating the wood with a solution of corrosive sublimate.

Kythul. A town of India, and the capital of a district of the same name. The district fell into the possession of the British in 1848, from the failure of heirs to the last rajah.

L.

Labarum. A military standard of the Roman empire. It consisted of a long lance crossed at right angles near the top by a staff, from which hung a small flag or streamer of purple cloth inwrought with gold and precious stones, and bearing the effigy of the emperor. Constantine the Great, when he embraced Christianity, substituted for that device a crown, a cross, and the initial letters of the name of Christ, and made it the imperial standard.

Labeates. A warlike people in Dalmatia, whose chief town was Scodra, and in whose territory was the Labeatis Palus (now Lake of Scutari), through which the river Bar-bana (now Bogana) runs.

Label, Lambel, or File. In heraldry, is the mark of cadency which distinguishes the eldest son in his father's lifetime. It consists of a horizontal stripe or fillet, with three points depending from it. When the mark of cadency itself is designated a *file*, its points are called *labels*.

Labicum, Labici, Lavicum, Lavici (now *Colonna*). An ancient town in Latium, on one of the hills of the Alban Mountain, 15 miles southeast from Rome. It was an ally of the Æqui; taken and colonized by the Romans, 418 B.C.

Laboratory. A department which is intrusted with the manufacture of combustible and other substances for military purposes, such as blank and ball cartridges for small-arms, cartridges for every description of ordnance, rockets, and all stores of similar character. This department is likewise intrusted with the conservation, packing, re-

storing, and supply of all gunpowder to the several military and naval departments, and in the British service is under the management of officers of the royal artillery especially appointed to that duty; in the U. S. service it is under the officers of the ordnance department. In the latter service officers of artillery, as well as non-commissioned officers and privates, are instructed at the artillery school, Fort Monroe, Va., in laboratory duties, and carefully taught the manipulation and manufacture of laboratory stores. At the West Point Military Academy, the cadets are thoroughly instructed in the above duties, as are also the naval cadets at the Naval Academy, Annapolis, Md. In the British service officers of artillery, as well as non-commissioned officers and gunners, are instructed in laboratory duties. Officers and non-commissioned officers of artillery in Germany, France, and Austria are required to possess a knowledge of the manufacture and care of laboratory stores.

Laboratory, Royal. An extensive military manufacturing department in Woolwich Arsenal, England. Although it has existed for many years, it was only in 1855 that the present very large establishment was organized. Here are foundries for the casting of shot, shell, grape, etc.; apparatus for the manufacture of percussion-caps, which are formed—hundreds at a time—out of the copper sheet; presses where rifle-bullets are squeezed into shape; fuzes in all stages of manufacture; and a thousand other instances of combined ingenuity and power. The

British government grants permission to inspect the factory. There are also laboratories—though on a comparatively small scale—at Portsmouth and Davenport, England.

Laboratory Stores. The following are among the laboratory stores used in service:

The *time-fuze*, the *percussion-fuze*, and the *concussion-fuze* (which see).

The *wooden fuze* consists of a conical plug of wood of the proper size for the fuze-hole of the shell with which it is to be fired. The axis of this plug is bored out cylindrically from the large, down to within a short distance of the small end, which is left solid. At the large end a cup is hollowed out, and the outside of the plug is divided into inches and parts, generally tenths, commencing at the bottom of the cup. The cylindrical space is filled with composition, pounded hard, and as regularly as possible, and the cup filled with meal powder moistened with whisky or alcohol. The rate of burning is determined by experiment, and marked on a waterproof cap, which is tied over the cup. Knowing the time any shell is to occupy in its flight, the fuze is cut off with a saw at the proper division, and firmly set in the fuze-hole with a fuze-set and mallet. The disadvantage of this fuze is its irregularity, it being very difficult to pound the composition so that equal lengths will burn equal times. The shell may either burst too soon, and a great part of its effect lost, or it may burst after burying itself in the ground, or it may burst after passing the proper point. This irregularity of burning is common to all fuzes where the composition is driven in successive layers in a column which burns in the same direction. This fuze is used with mortar shells. The composition of mortar-fuzes is, nitre 2 parts, sulphur 1 part, and meal powder 8 parts; the quantities of meal powder vary in fuzes for mortars of different calibers. Generally these fuzes are cut before being inserted in the shell; but they are sometimes bored through at the proper positions instead of being sawed. They are also cut obliquely, when the fuze is so long as to render it likely that it will reach the bottom of the shell; for by cutting it perpendicular to the axis, the whole base of the wood might be driven in contact with the bottom of the shell, and prevent the lighted composition from setting fire to the bursting charge.

The *paper time-fuze* consists of a cylindrical column of burning composition packed in a paper case, gradually increasing in thickness from its lower to its upper or outer extremity; to insure ignition, it is primed with rifle-powder at the larger end. It is inserted at the time of loading the piece into a brass or wooden plug previously driven into the fuze-hole of the shell. The composition has the same ingredients as gunpowder, the proportions being varied to suit the required rate of combustion; pure meal powder gives the quickest composition; by

adding certain proportions of sulphur and nitre, the composition burns more slowly. The rate of burning also depends upon the density of the composition and the purity and thorough mixture of the ingredients. These fuzes vary in length, burning from 4 to 40 seconds; they are graduated in seconds on the outside of the case, and can be cut to a length corresponding to any intermediate time of flight.

Belgian, or Bormann-fuze. See BORMANN-FUZE.

The *Wright-fuze*, a modification of the Bormann-fuze, extends the time of burning to 12 or 14 seconds.

United States sea-coast fuze. The paper case fits in a fuze-plug of bronze instead of wood. It fits the fuze-hole of the shell in the same way as the wooden plug, and is retained by the force of friction. A safety-cap and primer combined have been adopted to prevent ricochets, especially over water, from extinguishing the fuze. A recess in the top, filled with priming composition, is covered until the fuze is required for use, with a disk of lead or paper fitting accurately the opening. The fire is conveyed to the fuze composition through a crooked passage which is filled with priming, and prevents water from entering in sufficient quantity to extinguish the fuze. For security a small leaden plug is placed in the inner end of the fuze-plug, where it remains until it is driven out by the shock of the explosion. When the shell is placed in the piece, nothing more is necessary than to remove the disk which covers the recess in the top. *Paper-fuzes* are inserted at the moment of loading the gun, and into wooden or brass *fuze-plugs* previously driven into the shell.

Port-fire consists of a small paper case, filled with a highly inflammable but slow-burning composition, the flame of which is very intense and penetrating, and cannot be extinguished by water. It is principally used as an incendiary material in loading shells, and for communicating fire to the priming of guns when proving them.

Port-fire composition consists of nitre, sulphur, and meal powder, in different proportions. One kind is composed of nitre, 65 parts; sulphur, 22.5 parts; and meal-powder, 12.5 parts. A port-fire case, 18 inches in length, filled with this composition, burns 10 minutes.

Priming-tubes are small pipes having a cup on one end, and filled with a composition for firing cannon. The tube in general use in the U. S. service is the *friction-primer* (which see).

Slow-match is a slow-burning match prepared from hemp or flax slightly twisted, soaked in strong lye, or in water holding in solution sugar of lead. Cotton rope well twisted forms a good match without any preparation. Slow-match prepared from hemp or flax burns 4 to 5 inches to the hour; it is used principally for the purpose of retaining fire in the shape of a hard-pointed

coal, to be used in firing cannon, fireworks, etc. It was formerly used in field-batteries for lighting the port-fires with which the pieces were discharged; but both are now entirely superseded by the friction-primer.

Quick-match is a match made of threads of cotton, or cotton-wick, steeped in gummed brandy or whisky, then soaked in a paste of meal powder and gummed spirits, and afterwards strewed over with meal powder; one yard of it burns in the open air 18 seconds. The quick-match is used to fire mortars, and sometimes in proving pieces. It is extensively used in priming all kinds of fireworks, such as fire and light balls, carcasses, rockets, priming-tubes, etc., and in conveying fire very rapidly from one portion of a piece of firework to another. When used for discharging cannon, the quick-match is set fire to by a slow-match, port-fire, or any other convenient material. When used to prime carcasses, etc., it is set on fire by the flame from the piece.

The **Valenciennes** composition is a compound of 50 parts of nitre, 28 of sulphur, 18 of antimony, and 6 of rosin; it is used as an incendiary composition, in charging shells for the purpose of increasing their destructive property, by setting fire to buildings, shipping, etc. For manufacture of ammunition for small-arms, see "U. S. Ordnance Memorandum," No. 21, 1878.

Laborer (*Fr.*). In a military sense, expresses any direct and concentrated effort which is made to destroy a fortification. It likewise applies to the working of a bomb or shell, which excavates, plows up, and scatters the earth about wherever it bursts. **Laborer un rampart**, signifies to bring several pieces of ordnance discharged from two oblique directions to bear upon one centre. Shells are generally used on these occasions, and the chief design is to second the operations of the miner in some particular part from which the explosion is to take place.

Labuan Pulo. An island of the Malay Archipelago, lying off the northwest coast of Borneo. The British took possession of this island in 1846, and it was formally ceded to the British crown by the sultan of Borneo in 1848.

Lacandones. A tribe of Indians in Central America, who for more than three centuries maintained a hostile attitude to the Spaniards. They are nominally subject to Guatemala, but are in reality quite independent.

Lacay, or Laquet (*Fr.*). An old French militia was formerly so called. The name is found among the public documents which were kept by the treasurers belonging to the dukes of Brittany in the 16th century.

Lacerne (*Fr.*). The short woolen military cloak of the Romans.

Lacheté (*Fr.*). An opprobrious term which is frequently used among the French, and is applied in all instances of cowardice, want of spirit, or dishonorable conduct. *La*

trahison est une lacheté; treason is infamous in its nature.

Lachish. A city of Southern Palestine. It was taken after a two days' siege by Joshua, and, in later times, is repeatedly mentioned as a place strongly fortified. After a siege, conducted by Sennacherib in person, it was taken and plundered, with the customary massacre of its inhabitants. It was taken by Nebuchadnezzar at the downfall of the kingdom of Judæa, and was reoccupied by the Jews after the Return.

Lacker. A composition made use of for preserving iron cannon, carriages, shot, etc. The following are the proportional parts of compositions made use of for preserving iron cannon: (1) Pulverized black lead, 12; red lead, 12; litharge, 5; lampblack, 5; linseed oil, 66. This composition is to be boiled gently about twenty minutes, during which time it must be constantly stirred. (2) Ground umber, 8.75; pulverized gum shellac, 8.75; ivory-black, 8.75; litharge, 8.75; linseed oil, 78; spirits of turpentine, 7.25. The oil must be first boiled half an hour; the mixture is then boiled twenty-four hours, poured off from the sediment, and put in jugs, corked. (3) Coal-tar (of good quality), 2 gallons, and spirits of turpentine, 1 pint. In applying lacker, the surface of the iron must be first cleaned with a scraper and a wire brush, if necessary, and the lacker applied hot, in two thin coats, with a paint-brush. It is better to do it in summer. Old lacker should be removed with a scraper, or by scouring, and not by heating the guns or balls, by which the metal is injured. About 5 gallons of lacker are required for 100 field-guns and 1000 shot; about one quart for a sea-coast gun. Before the lacker is applied every particle of rust is removed from the gun, and the vent cleaned out.

Lacs d'Amour. In heraldry, a cord of running knots used as an external decoration to surround the arms of widows and unmarried women; the *cordeliér*, which differs but slightly from it, being used similarly with the shields of married women.

Lacunette (*Fr.*). A term in fortification. A small fosse or ditch was formerly so called. The word *cunette* (which see) has since been adopted.

Ladder Bridge. Used for crossing streams, etc. It is formed by running a cart or gun-limber into the stream and securing it there, with the shafts in a vertical position, by ropes from both sides of the river; one end of a ladder from each bank resting upon it, and covering the steps or rungs with planks.

Ladders, Scaling (*Fr. échelles de siège*). Are used in scaling when a place is to be taken by surprise. They are made several ways; sometimes of flat staves, so as to move about their pins and shut like a parallel ruler, for conveniently carrying them. The French make them of several pieces, so as to be joined together, and to be capable of any necessary length. Sometimes they are made

of single ropes, knotted at proper distances, with iron hooks at each end, one to fasten them upon the wall above, and the other in the ground; and sometimes they are made of two ropes, with staves between them to keep the ropes at a proper distance, and to tread upon. When they are used in the action of scaling walls, they ought to be rather too long than too short, and to be given in charge only to the stoutest of the detachment. The soldiers should carry these ladders with the left arm passed through the second step, taking care to hold them upright close to their sides, and very short below, to prevent any accident in leaping into the ditch.

Ladle. See IMPLEMENTS.

Lady of Mercy, Our. A Spanish order of knighthood, founded in 1218 by James I. of Aragon, in fulfillment of a vow made to the Virgin during his captivity in France. The object for which the order was instituted was the redemption of Christian captives from among the Moors, each knight at his inauguration vowing that if necessary for their ransom he would remain himself a captive in their stead. Within the first six years of the existence of the order no fewer than 400 captives are said to have been ransomed by its means. On the expulsion of the Moors from Spain, the labors of the knights were transferred to Africa. The order was extended to ladies in 1261. Their badge is a shield party per fess gules and or, in chief a cross pattée argent, in base four pellets gules for Aragon, the shield crowned with a ducal coronet.

Lady of Montesa, Our. An order of knighthood, founded in 1817 by King James II. of Aragon, who, on the abrogation of the order of Templars, urged Pope Clement V. to allow him to employ all their estates within his territory in founding a new knightly order for the protection of the Christians against the Moors. His request was acceded to by the following pope, John XXII., who granted him for this purpose all the estates of the Templars and of the knights of St. John situated in Valencia. The order is now conferred merely as a mark of royal favor. The badge is a red cross edged with gold, the costume a long white woollen mantle, decorated with a cross on the left breast, and tied with very long white cords.

Lagos. A city and seaport of Portugal, in the province of Algarve, about 23 miles east-northeast from the extremity of Cape St. Vincent. In the Bay of Lagos, Admiral Boscawen obtained a signal victory over the French Toulon fleet, August 18, 1759.

Lagos. In the Bight of Benin, Africa; this place was assaulted and taken by the boats of a British squadron, under Commodore Bruce, December 26-27, 1851. In 1862 the place was ceded to the British government, and created a settlement.

Lahore. The capital of the Punjab, in

British India, standing on the Ravee, 270 miles northwest from Delhi. It was taken by Baber about 1520, and was long the capital of the Mongol empire. It fell into the power of the Sikhs in 1798; was occupied by Sir Hugh Gough, February 22, 1846, who in March concluded a treaty of peace.

Laibach, or Laybach. A town of Austria, capital of the duchy of Carniola, 44 miles northeast from Trieste. This place was taken in 1799 by Bernadotte, and in 1809 by Macdonald. It is well known from the congress which was held in it in 1821, the object of which was the extinction of constitutional government, as established in Naples after the insurrection in 1820.

Laidley's Practice Musket. This gun is made out of an old smooth-bore musket, reamed out for a length of 11 inches, for the reception of a coil ribbon spring, on one end of which a closely-fitting piston is placed, having a stem of about 5 inches attached to its centre; a hole is bored through the breech-screw and a cut made on its under side to receive a spring; a circular disk with a flaring hole through its centre is secured in the barrel just in front of the end of the breech-screw; a short lever crosses the end of the barrel just in front of this disk, and is held in position by the spring already referred to; the hole in the cone is enlarged and receives a small spindle with a collar at its middle, which prevents it from coming out. About 12 inches from the breech a horizontal cut is made through the top of the barrel, leaving an opening of 2 inches in length; a cylindrical plug having a hole through its axis is inserted in the barrel at this place, and a handle screwed in. An inner barrel, having a bore of .22 inch and a length of 17 inches, its upper end counter-bored, is inserted in the barrel and secured by a screw; the length of the block is such as to close the space between the chambered recess and the end of the inner barrel. A hole is bored through the side of the stock to communicate with the hole through the breech-screw. A dart is fired from this musket, which when fired into the target is extracted with a claw-tool. The men in firing stand at a distance of 15 paces from the target; and two men use the gun, firing alternately. This is a very useful musket to practice the soldier in rifle-firing. The soldier can also be practiced at long ranges with this gun in the following manner: Place a target at 600 or 600 yards distant, or as far off as convenient, so that it can be seen through the open window; place a target (16 inches square, with a bull's-eye of .75 inch) 15 paces from the firing-stand, at such a height that the distant target may be seen 4 or 5 inches below the middle of its lower edge; mark on the floor the position for the feet of the man when firing, raise the longer leaf of the sight, aim at the distant bull's-eye, and fire; the shots will strike the near target if correctly placed, and the accuracy of aim will be

shown by the score thus made. The height of the target may have to be adjusted after the first few shots.

Laird. A leader or captain.

Laisches (*Fr.*). Were thin metal plates which the ancient Gauls placed upon the buff-coats of infantry, between the buff and the lining.

Lake Champlain. See CHAMPLAIN, LAKE.

Lake Ontario. See ONTARIO, LAKE.

Lake Regillus. In Italy, where tradition states the Romans defeated the Latin auxiliaries of the expelled Tarquins about 499 B.C.

Lama. See PACK AND DRAUGHT ANIMALS.

Lambrequin. Leathern strap or flap hanging from a cuirass, often highly ornamented. Also ribbon of different colors for fastening a helmet, twisted round its crest, the knot forming an ornament.

Lamia (now *Zeitun*, or *Zetuni*). A town in Phthiotis, in Thessaly, situated on the small river Achelous. It has given its name to the war which was carried on by the confederate Greeks against Antipater, after the death of Alexander, 323 B.C. The confederates under the command of Leosthenes, the Athenian, defeated Antipater, who took refuge in Lamia, where he was besieged for some months. Leosthenes was killed during the siege; and the confederates were obliged to raise it in the following year (322), in consequence of the approach of Leomatus. The confederates under the command of Antipater defeated Leomatus, who was slain in the action. Soon afterwards Antipater was joined by Craterus; and thus strengthened, he gained a decisive victory over the confederates at the battle of Cranon (322), which put an end to the Lamiian war.

Lamian War. See LAMIA.

Lampion de Parapet (*Fr.*). A lamp generally used on a parapet or elsewhere in a besieged place. It was a small iron vessel filled with pitch and tar, which was lighted by the troops as occasion required.

Lancaster. The chief town of Lancashire, England, situated on the river Lune. It is supposed to have been the *Ad Alaunam* of the Romans. It was granted by William I. or II. to Roger de Poitou, who erected a castle upon its hill. It was taken by the Jacobites, November, 1716, and November, 1745.

Lancaster Gun. See ORDNANCE, CONSTRUCTION OF.

Lancaster Herald. One of the six heralds of England, ranking second in seniority. His office is said to have been instituted by Edward III., when he created his son, John of Gaunt, duke of Lancaster. Henry IV. raised Lancaster to the dignity of king-at-arms. Edward IV., after reducing him back to the status of a herald, abolished his office, which was revived by Henry VII.

Lancaster Rifle. See SMALL-ARMS.

Lancastrians. See ROSES, WARS OF THE.

Lance. A weapon of war, consisting of a long shaft or handle, and metal point, now usually adorned with a small flag, and generally used by horsemen to transfix an enemy, but formerly used sometimes as a javelin. This offensive weapon was much used by the French in former times, particularly by that class of military gentlemen called chevaliers, and by the gendarmes. Before the reign of Philip de Valois, the chevaliers and gendarmes fought on foot, armed with lances only, both in battles and at sieges. On these occasions they shortened their lances, which were then said to be *re-taillees*, or cut again.

Lance (*Fr.*). Means likewise an iron rod which is fixed across the earthen end of a shell, and which keeps it suspended in the air when it is cast. As soon as the shell is formed, this rod must be broken, and carefully taken out with instruments made for that purpose. Shells ought to be scrupulously examined with respect to this article, as they could not be charged were the lance or any part of it to remain within. This is also the name of an instrument which conveys the charge of a piece of ordnance and forces it home to the bore.

Lance. A soldier armed with a spear; a lancer.

Lance. To pierce with a lance, or any similar weapon; to throw in the manner of a lance. See LANCH.

Lance a Feu (*Fr.*). A squib. A species of artificial firework which is made in the shape of a fuze, and is used for various purposes. The composition of the *lance a feu* consists of 3 parts of the best refined saltpetre, 2 parts of flour of sulphur, and 2 of antimony; the whole being pounded and mixed together. The chief use of the *lance a feu* is to throw occasional light across the platform, whilst artificial fireworks are preparing. They likewise serve to set fire to fuzes, as they can be taken hold of without danger.

Lance a Feu Puant (*Fr.*). Stink-fire lances prepared in the same manner that stink-pots are, and particularly useful to miners. When a sapper or miner has so far penetrated towards the enemy as to hear the voices of persons in any places contiguous to his own excavation, he first of all bores a hole with his probe, then fires off several pistols through the aperture, and lastly forces in a *lance a feu puant*, taking care to close up the hole on his side to prevent the smoke from returning towards himself. The exhalation and stinking hot vapor which issue from the lance, and remain confined on the side of the enemy, infest the air so much, that it is impossible to approach the quarter for three or four days. Sometimes, indeed, they have had so instantaneous an effect, that in order to save their lives, miners, who would persevere, have been dragged out by the legs in an apparent state of suffocation.

Lance de Feu (*Fr.*). A species of squib,

which is used by the garrison of a besieged town against a scaling party.

Lance, Free. See **FREE LANCE**.

Lance Socket. A leather socket which supports the butt of the lance when carried on horseback; called also lance bucket.

Lance-Corporal. An assistant to a corporal; a private performing the duties of a corporal; a lance-pesade. See **CORPORAL**, **LANCE**.

Lance-gaye (Fr.). See **ARCH-GATE**.

Lance-head. The head of a lance.

Lance-knight. A common or foot-soldier; a lansquenet. See **LANSQUENET**.

Lance-pesade. See **ANSPESSADE**.

Lance-rest. A projection like a bracket, on the right side of a breastplate in armor, to aid in bearing a lance.

Lancers. A description of cavalry soldiers in different armies of Europe, who are armed with lances. The type and perfection of lancers are the Russian Cossacks, whose long lances enable them to combat with enemies at a distance from which they themselves take little harm. The lancers were brought into European notice by Napoleon, who greatly relied upon some Polish regiments. After the peace of 1815, the arm was adopted in the English service, but it is thought by many that the British lancer has a weapon too short to enable him to charge an infantry square with any chance of success.

Lances Levées (Fr.). Uplifted lances, indicating that the enemy was beaten, and that the chevaliers or gendarmes should close the day by giving a final blow to the disordered ranks.

Lanch. To throw, as a lance; to dart; to let fly. To pierce with a lance, or as with a lance; to wound. Written also *launch*.

Land Batteries. Batteries used on land, as distinguished from floating batteries, etc., employed in the defense of harbors.

Landau. A strong town of Bavaria, in the Palatinate of the Rhine, situated on the Queich, 18 miles from Carlsruhe. This place was held alternately by the French and Austrians from 1680 to 1815, when it was assigned to the Germanic Confederation, under the protection of Bavaria.

Landen. See **NEERWINDEN**.

Land-force. A military force, army, or body of troops serving on land, as distinguished from a naval force.

Landgrave. A German nobleman of a rank corresponding to an English earl.

Landgravine. The wife of a landgrave.

Landing. In fortification, is the portion of the floor of the gallery between the frames that bound the entrance to a return. The landing is in all cases horizontal.

Landing of Troops. See **DISSEMBARKATION**.

Landshut. A town of Prussian Silesia. In June, 1760, the Austrians gained a decisive victory over the Prussians in this place.

Landsturm. A local militia of Prussia,

formed of men above forty years of age, which never leaves its own district, and is only called out in case of actual invasion.

Landwehr. The militia of a country. Austria has a landwehr—*bei den Oestreichern*; and Prussia—*bei den Preussen*. The former are a sort of a reserve to each regiment of the line; they are under the same colonel, and are drilled once a year with the line regiment. The Prussian landwehr is more completely national. Every Prussian subject commences military service in the standing army, a force composed of the youth of the nation from twenty to twenty-five years old. After two or three years of service, the soldier proceeds to his home, but is liable to be called upon to join his regiment. During this period he is called a *reservist*. At the expiration of five years from the date of enlistment, the men are transferred into the first class or levy of the landwehr, remaining in it until their thirty-second year. In time of war they are liable to be called upon to serve with the regiment of the line of a corresponding number,—in fact, they form the reserve of that regiment whence reinforcements are drawn. From their thirty-second to their thirty-ninth year the men belong to the second levy, and are only called out occasionally in time of peace, but in war they garrison fortresses.

Lane. The term applied to a body of soldiers in two ranks standing face to face, forming, in fact, a street, passage, or lane. The French call this formation *haie*, or hedge. It is used when troops form a guard of honor for persons of rank to pass through.

Langensalza. A town of Prussian Saxony, on the Salza, 20 miles northwest of Erfurt. The French and Saxons were here defeated by the Prussians in 1760; in 1761 the Prussians and English defeated the German imperial army; in 1818 the Prussians were defeated by the Bavarians; and in 1866, a bloody contest took place between the Prussians and Hanoverians, resulting in the capture of the Hanoverian army as prisoners of war.

Langrel, or Langrage. A villainous kind of shot, consisting of various fragments of iron bound together, so as to fit the bore of the cannon from which it is to be discharged. It is seldom used but by privateers.

Languedoc (anc. *Narbonensis Prima*). An old province of the south of France, bounded east by the river Rhone, and south by the Mediterranean. As a Roman province it enjoyed the freedom of Italy. It formed part of Gallia Narbonensis, but, in the Middle Ages, was known as *Septimania*, from the seven cathedral churches which it contained. From the hands of the Romans it passed into the possession of the Goths; and being wrested from them, it was occupied by the Saracens till 725, when they were expelled by Charles Martel. It afterwards came under the sway of Philip the Bold, and became a part of the French kingdom in 1361.

Languet. A small slip of metal on the hilt of a sword, which overhangs the scabbard; the ear of a sword.

Lansdown. In Somersetshire, England. The Parliamentary army under Sir William Waller was defeated here July 5, 1643.

Lansquenet. A German foot-soldier; originally one of the serfs who followed the camp in the service of the common soldiers; afterward one of the independent troops who hired themselves to those willing to pay highest for their services.

Lanterne (*Fr.*). Sometimes called *cuiller*, or ladle, serves to convey gunpowder into a piece of ordnance. It is made of copper, and resembles a round spoon or ladle, which is fixed to a long pole.

Lanuvinum (now *Civita Lavinia*). An old and important city of Latium, on the Appian Way, 20 miles south of Rome. Tradition describes it as a colony from Alba; but it first rose to importance in the 5th century B.C., when it took part against Rome as one of the thirty cities of the Latin League. Its name again appears in the long wars between Rome and the Æqui and Volsci, siding with the former; it changed sides in 883 B.C., but was leniently treated by its old ally at the end of the war. In the great Latin war, 340 B.C., it again took part against Rome, and in the general settlement at the close of hostilities, it obtained the Roman *civitas*.

Lanyards. See IMPLEMENTS.

Laodicea ad Mare (now *Ladikiyeh*). A city on the coast of Syria, about 50 miles south from Antioch; was built by Seleucus I. on the site of an earlier city, called Ramitha. It was severely punished by Cassius for its adherence to Dolabella, and again suffered in the Parthian invasion of Syria. It was taken and destroyed by the Arabs in 1188.

Laon. A town of France, in the department of the Aisne, 75 miles northeast from Paris. It was besieged by the barbarians in 407; taken and sacked by Gelimor in 682; unsuccessfully besieged by the Normans in 882; taken by Eudes, count of Paris, in 892, by Charles the Simple in 895, and by Robert of France, who held it till 923. It was taken by the Duke of Burgundy in 1411; by the royal troops in 1414; surrendered in 1419 by Philip the Good to the English, who were dispossessed in 1429. It was unsuccessfully besieged by the Calvinists in 1567, and was taken by Henry IV. in 1594. On March 10, 1814, an indecisive battle was fought here between the French troops under Napoleon, and the Prussians under Blücher.

Lapelle, or Lapel. The facings of uniform coats were formerly so termed. Until the introduction of epaulettes in 1812, the white lapelle was synonymous with a lieutenant's commission in the British service.

Lapithæ. A wild race, inhabiting, in ancient times, the mountains of Thessaly. They derived their name from a mythical

ancestor, *Lapithes*, a son of Apollo, and the brother of Centaurus, the equally mythical ancestor of the Centaurs. A bloody war is said to have been waged between the kindred races in prehistoric times, which ended in the defeat of the Centaurs, but the Lapithæ were in their turn defeated by Hercules.

Laplander. An inhabitant of Lapland, a country of Northern Europe.

Lapse. To fall in, or belong to. This expression was formerly used in the British army to signify the reversion of any military property. Thus, upon the sale or purchase of one commission at the regulated difference, another (where there are two) is said to lapse to government. Commissions lapse, or fall into the patronage of government, when vacancies happen by death, by officers being superseded, or where officers apply to sell who have only purchased a part of their commissions, and have not served long enough to be entitled to sell the whole; in which case they are only permitted to sell what they actually purchased, and the remainder is in the gift of the government.

Lap-weld. A weld in which the welding edges are made thin, lapped one over the other and welded.

Laranda (now *Larenda*, or *Caraman*). A considerable town in the south of Lycaonia. It was taken by storm by Perdiccas, but afterwards restored. It was used by the Isaurian robbers as one of their strongholds.

Largs. A seaport of Scotland, in Ayrshire, 28 miles southwest from Glasgow. Here, in 1263, Alexander III. of Scotland gained a victory over Haco, king of Norway.

Lariat. The lasso, a long cord or thong of leather with a noose, used in catching wild horses and other animals. The term is now applied to a rope 1½ inches in circumference and 80 feet long, made of Italian hemp, which is used in the U. S. cavalry service to picket horses while grazing.

La Roda. A town of Spain, in the province of Murcia, 22 miles northwest from Albacete. This place is famous for the defense it made against the Carlists in 1840.

La Rothière (France), Battle of. Took place between the French, commanded by Napoleon, and the Prussian and Russian armies, which were defeated with great loss after a desperate engagement, February 1, 1814. This was one of Napoleon's last victories.

Lascar. In the East Indies, signifies properly a camp-follower, but is generally applied to native sailors on board of British ships. The Lascars make good seamen, but being of an excessively irritable and revengeful nature, are generally kept in the minority in a ship's crew.

Lash. To tie or bind with a rope or cord; to secure or fasten by a string.

Lashes. Formerly a general court-martial could sentence a soldier to receive a certain number of lashes. This mode of punishment is prohibited in the U. S. service. See APPENDIX, ARTICLES OF WAR, 98.

Lashing-rings. Are fixed on the sides of artillery traveling-carriages, to lash the tarpaulin, as also to tie the sponge, rammer, and ladle.

Lasso. A rope or cord with a running noose, used by men on horseback in Spanish America, Texas, and Southern California for catching cattle, wild horses, grizzly bears, etc. It is said that the lasso was used by the ancient Sarmatians and Parthians. Certain Patagonians use a lasso with a stone tied to the end,—instead of a noose.

Laswarree. A town of Hindostan, in Delhi, which was the scene of the defeat of the Mahrattas by Lord Lake, November, 1808.

Latham House. In Lancashire, England; it was heroically defended for three months against the Parliamentarians, by Charlotte, countess of Derby. She was relieved by Prince Rupert, May, 1644. The house was, however, surrendered December 4, 1646, and dismantled.

Lathe. In the manufacture of ordnance, lathes are machines for turning cannon, gun-barrels, etc.

Latrines. Conveniences for soldiers in camps and barracks. Much attention has of late been devoted to their construction; a large percentage of the army sickness having been traced to their defective and impure condition.

Lauenberg. A duchy of Northern Germany, but formerly united with the crown of Denmark; was conquered from the Wends by Henry the Lion of Saxony about 1152; ceded to Hanover, 1689, and seized along with Hanover by the French in 1808. It was afterwards, with some change of boundary, made over to Prussia, and by Prussia transferred to Denmark in 1816, with reservation of rights. In 1870 it was re-annexed to Prussia.

Laufach. In Bavaria, Southwestern Germany; it was taken by the Prussians, under Wrangel, July, 1866, after a sharp action, in which the Hessians were defeated.

Launch. To throw as a spear or dart; to send forth. Written also *lanch*.

Laundresses. Camp-women, usually the wives of soldiers, employed to wash soldiers' clothing.

Laurel. An evergreen shrub, selected for the brows of heroes and conquerors, and emblematic of their unfading reputation.

Lauterburg. A town of France, in the department of the Lower Rhine, 88 miles northeast from Strasburg. In 1798 the French forced the famous lines of Lauterburg, and took this place.

Laval. A town of France, in the department of the Mayenne, situated on the Mayenne, 42 miles east from Rennes. This place suffered greatly in the Vendean war, towards the close of the last century.

La Vendée (West France). The French royalists of La Vendée took arms in March, 1798, and were successful in a number of hard-fought battles with the republicans, be-

tween July 12, 1798, and January 1, 1794, when they experienced a severe reverse. Their leader Henri, comte de Larochejaquelein, was killed March 4, 1794. A short peace was made at La Jaunay, February 17, 1796. The war was terminated by Gen. Hoche in 1796. A treaty of peace was signed at Luçon, January 17, 1800.

Lavure (Fr.). The grains, dust, or detached pieces of metal which fall in casting cannon.

Law, Martial. See MARTIAL LAW.

Law, Military. A branch of the general municipal law, consisting of rules ordained for the government of the military forces of a state or government, and those voluntarily serving with them, equally in peace and war, and administered by tribunals of special and limited jurisdiction. See APPENDIX, ARTICLES OF WAR.

Law of Arms. Certain acknowledged rules, regulations, and precepts, which relate to war; and are observed by all civilized nations. The laws of arms also show how to proclaim war, to attack the enemy, and to punish offenders in the camp, etc.

Law of Nations. Such general rules as regard the embassies, reception and entertainment of strangers, intercourse of merchants, exchange of prisoners, suspension of arms, etc.

Laws, Execution of. On all occasions when the troops are employed in restoring or maintaining public order among their fellow-citizens, the use of arms, and particularly fire-arms, is obviously attended with loss of life or limb to private individuals; and for these consequences, a military man may be called to stand at the bar of a criminal court. A private soldier also may occasionally be detached on special duty, with the necessity of exercising discretion as to the use of his arms; and in such cases he is responsible, like an officer, for the right use or exercise of such discretion.

Some years ago, the public journals of London recorded the meritorious behavior of a private sentry, upon the occasion of a riotous mob assembled at the entrance of Downing-Street with the intention of attacking the government offices in that quarter of the town. This man standing alone presented his musket, and threatened to fire upon the crowd, if the slightest attempt were made to approach the particular office for the defense of which he was placed on duty, and succeeded by the terror thus created, though at a great risk of consequences to himself, in keeping the rioters at bay until a larger force arrived to assist him. The soldier's conduct was publicly much approved. It was also clearly legal according to Macadam's case (a soldier tried before the courts of Scotland in 1785); and if after the announcement of his intentions the mob had pressed forward to execute their purpose, he would have been held justified at law in firing at the rioters upon his own responsibility. The Duke of Wellington, as Con-

stable of the Tower, testified his marked approbation of this man's conduct, by promoting him at once to a wardenship at that fortress.

The right of officers or soldiers to interfere in quelling a *felonious riot*, whether with or without superior military orders, or the direction of a civil magistrate, is quite clear, and beyond the possibility of mistake. This subject, however, was formerly little understood; and military men failed in their public duty through excess of caution.

But notwithstanding the existence of a clear right and duty on the part of military men voluntarily to aid in the suppression of a riot, it would be the height of imprudence to intrude with military force, except upon the requisition of the proper authority, unless in those cases where the civil power is obviously overcome, or on the point of being overcome, by the rioters.

When the civil officer may not deem it safe to wait for the orders of government, he should address his requisition for troops, not to any subordinate military officer, but to the highest authority, to whom he should communicate his object in making it, and all the information he may possess regarding the strength and designs of those by whom the public peace is menaced or disturbed. His duty is confined to these points. *He has no authority in directing military operations.* The officer commanding the troops has alone authority to determine the number and nature of those to be employed; the time and manner of making the attack, and every other operation for the reduction of the enemy.

Under no circumstances can U. S. troops be called into service at the "polls."

In the United States, regular troops can be ordered only to serve against rioters, or other lawless bands of citizens, under the orders of the President to co-operate with the civil authorities.

It should ever be the aim of military men to attain the desired end by the exercise of passive interposition.

Laws of War. The recognized rules for the conduct of civilized warfare. These rules relate to the treatment of prisoners, non-combatants, spies, traitors, etc.; the disposition of private property, the rights of capture, occupation and conquest, the establishment of blockades, the rights and obligations of neutrals, etc.

Lay. To quit; to surrender the use of; as, lay down one's arms. *To lay for*, is to attempt something by ambuscade.

Lay. To point or aim; as, to lay a gun. See **POINTING**.

Lay About, To. To strike, or throw the arms on all sides; to act with vigor.

Layette (*Fr.*). Three-sided tray or box without a cover, used to carry powder from one mortar to another in powder-mills.

Lazarus. A military order instituted at Jerusalem by the Christians of the West, when they were masters of the Holy Land.

They received pilgrims under their care, and guarded them on the roads from the insults of the Mohammedans. This order was instituted in the year 1119, and was confirmed by a bull of Pope Alexander IV. in 1255, who gave it the rule of St. Augustine.

Lazzaro, St. In Northern Italy, where the king of Sardinia and the Imperialists defeated the French and Spaniards after a long and severe conflict, June 4, 1746.

Lead. To conduct as a chief or commander; as, let the troops follow where their general leads.

Lead Balls. Are now generally made by compression, by means of machinery, either at arsenals or at private establishments.

Lead Out. A command in the mounted service to cause the horses to be taken from the stable or picket line preparatory to mounting or harnessing.

Leader. A chief, a commander; a captain. Also the directing musician of a band.

Leadership. The state or condition of a leader.

Leading. The clogging of the grooves of a rifle with lead from the bullet,—one of the principal obstacles against continuous accurate shooting. It is obviated by covering the bullet with a paper patch or by using a lubricant in the canellures. See **BULLETS**.

Leading Column. The first column that advances from the right, left, or centre of any army or battalion.

Leading File. The first two men of a battalion or company that marches from right, left, or centre, by files. See **FILE-LEADER**.

Leading Guide. The foremost guide of a column.

Leading Question. In the proceedings of military tribunals, is a question to a witness which suggests the desired answer. Such questions are objectionable except under certain conditions.

Leaf Sight. A form of elevating rear sights, consisting of several hinged leaves of different heights. See **SIGHT**.

League. A measure of length or distance, equal, in England and the United States, to three geographical miles.

League. See **HOLY LEAGUE**.

League, Achaean. See **ACHÆAN LEAGUE**.

League, First Suabian. See **SUABIA**.

League, Great Suabian. See **SUABIA**.

League, Holy. See **HOLY LEAGUE**.

League of Marbach. See **SUABIA**.

Leaguer. A camp, generally of an investing army.

Leaguer. One who unites in a league; a confederate.

Leaguerer. One who belongs to or is engaged in a league; a leaguer.

Leave of Absence. See **ABSENCE, LEAVE OF**.

Lech. A river in Southern Germany, near which the cruel Gen. Tilly was defeated by the Swedes, under Gustavus Adolphus, April 18, 1682. Tilly died of his wounds soon after.

Leek. The Welsh emblem, in consequence of a command from Dewi, or David, afterwards archbishop of St. David's, in 519. On the day that King Arthur won a great victory over the Saxons, Dewi is said to have ordered the soldiers to place a leek in their caps.

Leesburg. See BALL'S BLUFF.

Legatus. Among the Romans, an ambassador, or lieutenant-general. Legati were of three kinds: (1) Those sent by foreign nations on an embassy to Rome. (2) Those sent from Rome on an embassy to foreign countries or the provinces. (3) Those who served under Roman generals during war, or under the pro-consuls and prætors in the provinces. The latter kind was generally a person of high military skill, and was appointed by the consul, prætor, or dictator, under whom he was intended to serve. His nomination, however, was not legal until sanctioned by the senate. His duty was to aid his superior officer, by advising him in all great emergencies, by acting as his substitute, both in civil and military affairs, and by assuming his insignia as well as authority during his absence. In the last case, he was called *legatus pro prætoris*. The number of legati under one superior differed in proportion to the importance of the war or the extent of the province.

Leghorn (It. *Livorno*). A large maritime town in Central Italy, in the province of Leghorn. It was entered by the French army July 27, 1796; evacuated by the French in 1799, and retaken in 1800. It was unsuccessfully attacked by the British and Italian forces in December, 1818. The Austrians took the city from the insurgents May 12 and 18, 1849, and quelled a slight insurrection, July, 1867.

Legion (Lat. *legio*). A corps of soldiers in the Roman armies, first formed by Romulus, about 750 B.C., when it consisted of 8000 foot and 800 horse. When Hannibal was in Italy, 216 B.C., the legion consisted of 5200 soldiers; and under Marius, in 88 B.C., it was 6200 foot besides 700 horse. There were 10, and sometimes as many as 18 legions kept at Rome. Augustus had a standing army of 45 legions, together with 25,000 horse and 87,000 light-armed troops, about 5 B.C.; and the peace establishment of Adrian was 80 of these formidable brigades. A legion was divided into 10 cohorts, and every cohort into 6 centuries, with a vexillum, or standard, guarded by 10 men. The peace of Britain was protected by 3 legions. The French army was divided into legions subsequent to the reign of Francis I. See THUNDERING LEGIONS.

Legion of Honor, Order of the. An order of merit instituted under the French republic in May, 1802, by the first consul, Napoleon Bonaparte. The order originally comprised three classes,—grand officers, commanders, and legionaries. The class of grand officers was, on the coronation of Napoleon I., divided into Knights of the Grand Eagle

and grand officers. On the restoration of the Bourbons the Legion was remodeled so as to consist of four classes,—viz., grand officers, grand crosses, commanders, and knights, but the order lost much of its original character. The order confers its distinction for civil and military valor, but especially for the latter. The college of the Legion is in possession of considerable means, which have been augmented by the addition of property belonging to Louis Philippe. Out of this fund pensions are paid to certain members of the order who have been wounded or who have undergone the amputation of a limb in service. These pensions have sometimes amounted to as large a sum as 6,000,000 of francs annually.

Legionary. Relating to or consisting of a legion or of legions; as, a legionary force.

Legionary. One of a legion.

Legnago. A fortress on the Adige, Northern Italy, one of the quadrilateral. It was captured by the French in 1796; but reverted to the Austrians in 1815. It was surrendered to the Italians in October, 1866.

Legnano. A town in Northern Italy, in the province of Milan, where the emperor Barbarossa was defeated by the Milanese and their allies, May 29, 1176, which victory led to the treaty of Constance in 1183.

Leicester. A town of England, and the chief town of Leicestershire, situated on the Soar. During the civil war it was taken by Charles I., May 81, and by Fairfax, June 17, 1645.

Leinster. A province of Ireland, occupying the southeast part of that island. It was a kingdom in 1167. The abduction of Devorgilla, wife of O'Rourke, a lord of Connaught, by Dermot, king of Leinster, in 1152, is asserted to have led to the landing of the English, and the subsequent conquest. The province of Leinster gave the title of duke to Schomberg's son in 1690. The title became extinct in 1719, and was conferred on the family of Fitzgerald in 1766.

Leipsic. A city of the kingdom of Saxony, situated about 65 miles west-northwest of Dresden, near the Prussian border, in a large and fertile plain. The Elster, the Pleisse, and the Parthe flow through or past the city, and unite about 3 miles below it. The city sprung up at the junction of the Pleisse and the Parthe, and is first mentioned as a town in 1015. It gradually increased in prosperity and importance. The famous *Leipsic Conference* between Luther, Eck, and Carlstadt, in 1519, greatly tended to the promotion of the Reformation. It suffered greatly in the Thirty Years' War, in which it was five times besieged and taken, and again in the Seven Years' War; and although the commercial changes connected with the French revolution at first affected it very favorably, yet it suffered not a little amidst the terrible struggle of the years 1812 and 1813, when it was alternately in possession of the French and

of the allies. The immediate neighborhood of Leipsic has been the scene of two battles of great importance in the history of Germany and of Europe,—the battle of Leipsic, or of Breitenfeld (see BREITENFELD), on September 7, 1631, and the great battle called the *Battle of the Nations*, which continued for three days, October 16–18, 1813. The latter was one of the most bloody and decisive of those which effected the deliverance of Europe from French domination. The troops under Napoleon in this battle amounted to about 180,000 men, and those of the allies, commanded by Prince Schwarzenberg, Marshal Blücher, and Bernadotte, crown-prince of Sweden, to almost 300,000. About 2000 pieces of artillery were brought to the field. The loss of the French was reckoned at about 88,000 killed and wounded, and 30,000 prisoners; that of the allies to about 48,000. The victory of the allies was complete; the French being compelled to evacuate Leipsic, and to retreat.

Leith. A town of Scotland, 2 miles northeast from Edinburgh, of which it is the seaport. It was burned in 1541 by an English fleet, and in 1549 it was occupied by French troops, who came to the assistance of Mary of Guise.

Leleges. An ancient race which inhabited Greece before the Hellenes, and are mentioned along with the Pelasgians as the most ancient inhabitants. They were a warlike and migratory race, and piracy was their chief occupation. The Leleges must be regarded as a branch of the great Indo-Germanic race, who became incorporated with the Hellenes, and thus ceased to exist as an independent people.

Length of Cannon. Is the distance from the rear of the base-ring to the face of the piece, and the *extreme length* is from the rear of the cascabel to the face.

Lengthen. To extend in length; to make longer; to elongate; as, to lengthen a line of troops. *To lengthen the step*, to take more than the prescribed pace.

Lenni-Lenape. See DELAWARES.

Lens. A parish and town of France, in the department Pas-de-Calais, 9 miles from Arras. A battle was fought here in 1648, between the Spanish forces and those of the Prince of Condé, in which the latter gained the victory.

Lentini (Lat. *Leontini*). A city of Sicily, situated between Syracuse and Catania. In 427 B.C., the Lentinians applied to the Athenians for support against Syracuse; they were sent twenty ships, under the command of Laches and Charesades. In 215 B.C., they raised their standard of open war against Rome; but Marcellus hastened to attack the city, and made himself master of it without difficulty. Under the Roman government it was restored to the position of an independent town.

Leon. A province of Spain, subdivided into the smaller provinces of Salamanca, Zamora, and Leon. The kingdom of Leon

was erected in 746, by Alfonso the Catholic, out of the provinces he had wrested from the Saracens and the older kingdom of Asturias, and in 1280 it was permanently united to Castile. During the Peninsular war it suffered greatly.

Lepanto (anc. *Naupactus*). Called by the Greek peasants Epakto, a seaport town of Greece, 12 miles northeast from Patras. The name Naupactus is said to have originated with the Heraclids, who are reported to have there built the fleet with which they invaded the Peloponnesus. After the Persian war it fell into the possession of the Athenians, who settled it with the expatriated Messenians. The Athenians made it their chief military station in Western Greece during the Peloponnesian war. At its close Lepanto was taken by the Locrians, and afterwards passed in succession through the hands of the Etolians, Macedonians, Achæans, and Romans. In 1475 it was invested by the Turks, who, after the loss of 80,000 men in four months, were forced to raise the siege. Within the Gulf of Lepanto, in 1571, was fought the great naval engagement between the Ottomans and the Christian powers of the Mediterranean, under Don John of Austria, in which the former lost about 200 galleys and 20,000 men.

Lerida. A town of Spain, in Catalonia, on the Segre, 80 miles northwest from Barcelona. In 1707 this place was stormed by the French, and in 1810 it was again taken by French troops under Suchet.

Lesse (*Fr.*). A machine covered with raw hides, used as a mantelet by the ancient Greeks for different purposes.

Let Off, To. To discharge; to let fly, as an arrow; or fire the charge of, as a gun.

Letter Stamp. See INSPECTION OF CANNON.

Letters Patent. The written instrument by which a government grants to an inventor the exclusive right and use of his invention for a term of years.

Lettre de Cachet (*Fr.*). An infamous state paper, which existed before the French revolution, which was sealed, and the person upon whom it was served carried into confinement without ever seeing the authority by which he was hurried off in so peremptory a manner, or being tried afterwards for any specific offense. It was always written by the king, countersigned by one of his principal secretaries of state, and sealed with the royal signet.

Lettre de Passe (*Fr.*). A paper which was formerly signed by the kings of France, authorizing an officer to exchange from one regiment into another.

Leuctra. A village of Boeotia, situated between Thebes and Plataea, in the territory of the former, celebrated as the scene of the great battle between the Spartans, commanded by Cleombrotus, and the Thebans, under Epaminondas, in which the former were defeated, and the supremacy of Sparta finally overthrown.

Leuthen. A village of Prussia, in Lower Silesia, 9 miles west of Breslau. It is celebrated for the victory won there December 5, 1757, by Frederick the Great, with 33,000 men, over the Austrians under Prince Charles of Lorraine at the head of 92,000.

Levee en Masse (Fr.). A general rising of the people of any country, either for the purpose of self-defense, or to answer the intention of its governing powers.

Level. In mining, is a horizontal passage or gallery.

Level, Gunner's. See GUNNER'S LEVEL.

Level, Horizontal. Free from obstructions or declivities.

Level, James's. An instrument to find the highest points of the breech and muzzle of a cannon, when the carriage-wheels stand on uneven ground. **Plumb-level,** one in which the horizontal arm is placed in true position by means of a plummet or plumb-line, to which it is at right angles. **Spirit-level,** one in which the adjustment to the horizon depends on the position of a bubble, or small vacant space, in the upper side of a glass tube, which is slightly curved and nearly filled with alcohol or ether. **Surveyor's level,** or *leveling instrument*, a telescope with a spirit-level attached, and with suitable screws, etc., for accurate adjustment, the whole mounted on a tripod for use in leveling.

Levellers. A fanatical party in Germany, headed by Muncer and Storck in the 16th century, who taught that all distinctions of rank were usurpations on the rights of mankind. At the head of 40,000 men Muncer commanded the sovereign princes of Germany and the magistrates of cities to resign their authority; and on his march his followers ravaged the country. The landgrave of Hesse at last defeated him; 7000 of the enthusiasts fell in battle, and the rest fled; their leader was taken and beheaded at Mulhausen in 1525. The English "Levellers," powerful in Parliament in 1647, were put down by Cromwell in 1649, and their leader, Lilburn, imprisoned.

Lever-jack. See IMPLEMENTS.

Levet. A blast of a trumpet,—probably that by which soldiers are called in the morning. This term is obsolete.

Levy (Fr. *levée*). Is the compulsory raising of a body of troops from any specified class in the community for purposes of general defense or offense. When a country is in danger of instant invasion, a *levée en masse* is sometimes made,—i.e., every man capable of bearing arms is required to contribute in person towards the common defense. On less urgent occasions, the levy may be restricted to a class, as to men between eighteen and forty years of age. At other times, a levy of so many thousand men of a certain age is decreed, and the districts concerned draw them by lot from among their eligible male population. In armies sustained by volunteering, the levy, which is a remnant of barbarous times, is

unnecessary; but the system was frequently resorted to in France before the enactment of the conscription laws. In 1862-64 there were great levies in the United States of America; and in any country where great danger is apparent, and volunteers are not sufficiently numerous, recourse must at all times be had to a levy of the people. This term is also applied to the assessment of taxes, tolls, or contributions.

Levy. To raise or collect troops or funds by a levy. The word has also other meanings; as, to levy war, to make war, to begin hostilities; to *levy* a siege, to desist from, to raise the siege. In this latter sense it is nearly obsolete.

Lewes. A town of England, in Sussex, on the Ouse, 7 miles northeast from Brighton. Near this town, in 1264, Henry III. was defeated by Simon de Montfort, and imprisoned in the castle.

Lewis. A device for lifting stones, consisting of two wedge-shaped pieces of iron, which are inserted butt foremost into a dovetail mortise in the stone, and keyed by inserting a piece between them. All three are then shackled to the lifting-chain by a bolt passing through them.

Lexington. A township of Middlesex Co., Mass., 11 miles northwest from Boston. The first battle in the war between Great Britain and her revolted colonies in North America was fought here on April 19, 1775, and ended disastrously for the British.

Lexington. A village of Lafayette township, Mo., on the right bank of the Missouri River. In September, 1861, a body of Federal troops under Col. Mulligan were here captured by the Confederate general Price. The town was retaken by the Federals in October following. In October, 1864, an indecisive engagement took place here between the armies of Gens. Price and Blunt.

Leydan (anc. *Lugdunum Batavorum*). An important city of the Netherlands, in the province of South Holland, on the Old Rhine, 6 miles from its outlet in the North Sea. It was once a strong fortress, and the siege which it sustained from the Spaniards in 1578-74 made it famous. For seven weeks there was no bread within its walls, but the burghers still resisted, though the hunger became almost unbearable. At last the Prince of Orange came to their rescue. The dykes were opened, and the waters, which drowned a great number of the besiegers, carried a fleet of 200 boats loaded with provisions to the city. As a reward for the valor the city evinced during this siege, the Prince of Orange founded a university here.

Liburnia. In ancient times was a portion of Northern Illyricum, in the neighborhood of the Sinus Flanaticus, now the present Croatia and Dalmatia. It was inhabited by the Pelasgic race, who were daring seamen and noted pirates. Their privateers, with large lateen-sails, were for centuries the terror of the seas, and during the second Macedonian war the Romans adopted them.

Libyans. The name formerly given to the inhabitants of the northern portion of Africa, with the exception of the delta of the Nile. They fell under the sway of the Romans, and subsequently relapsed into barbarism.

Licorne. See **HOWITZER**.

Lictor. A Roman officer who bore an axe and fasces as insignia of his office. His duty was to attend the chief magistrates when they appeared in public, to clear the way and enforce respect for them. In addition, he performed constabulary duties.

Lid, or Roof. See **ORDNANCE**.

Lide (Fr.). A warlike machine which was formerly used to throw large stones against a fortified place, or upon an enemy.

Lie. To be situated; to occupy a fixed place; as, the troops lie encamped at Washington. *To lie in ambush*, to be posted in such a manner as to be able to surprise your enemy, should he presume to advance without having previously cleared the woods, hedges, etc. *To lie in wait*, to take a position unobserved by the enemy, and to remain under arms, in the expectation of suddenly falling upon his flanks or rear. *To lie under cover*, to be under the protection of a battery, or to be sheltered by a wood, etc. *To lie under arms*, to remain in a state ready for action.

Liebenau. A town of Bohemia. Here was fought the first action of the Seven Weeks' War, June 26, 1866, when the Austrians were compelled to retreat by the Prussians under Gen. von Horne.

Liegnitz. A town of Prussian Silesia, at the conflux of the Katzbach, the Schwarzwasser, and the Neisse, 35 miles northwest from Breslau. The Austrian army was totally defeated before Liegnitz in 1760 by the Prussians under the command of Frederick the Great.

Lieutenancy. The office or commission of a lieutenant.

Lieutenant. From the French, *lieutenant*, "holding the place," in a general sense is an officer performing the duties of his superior. The rank was abolished by Charles IX. in the French army, and re-established by Henry IV. In company organizations the lieutenant comes next after the captain, and supplies his place during temporary absence. There are two grades of lieutenants, first and second. A lieutenant in the navy is an officer ranking with a captain in the army, holding rank above a master and below a lieutenant-commander.

Lieutenant de la Colonelle (Fr.). The second officer, or what was formerly styled the captain-lieutenant of the colonel's company of every infantry regiment in France.

Lieutenant du Roi (Fr.). During the monarchy of France there was a deputy governor in every fortified place, or strong town, who commanded in the absence of the governor, and was a check upon his conduct when present. This person was called *lieutenant du roi*. *Lieutenants des Gardes Fran-*

coises et Suisses; lieutenants belonging to the French and Swiss guards. During the existence of the monarchy in France they bore the rank of lieutenant-colonel, and took precedence of all captains. *Lieutenants Provinciaux d'Artillerie* were certain officers belonging to the old French service, and immediately attached to the artillery, who bore the title or name of the particular province in which they were stationed. Several of these lieutenants, who had military employment under the board of ordnance, received the rank of lieutenant-general in the army from the king, and could rise to the most exalted stations in common with other officers.

Lieutenant-Colonel. His rank corresponds with that of commanders in the navy. See **COLONEL**, **LIEUTENANT**.

Lieutenant-General. His rank is equivalent to that of a vice-admiral. See **GENERAL**, **LIEUTENANT**.

Life-guard. A guard of the life or person; a guard that attends the person of a prince, or other high officer or dignitary; a body-guard. See **GUARDS**.

Light Battery. A mounted battery of field-guns.

Light Bobs. In the British service, a familiar term used for the light infantry.

Light Horse. All mounted soldiers that are lightly armed and accoutred for active and desultory service, may be considered under this term. Thus light dragoons, hussars, mounted riflemen, etc., are strictly speaking light horse.

Light Infantry. A body of armed men selected and trained for rapid evolutions; often employed to cover and assist other troops. See **INFANTRY**, **LIGHT**.

Light Infantry Company. In the British service, a company of active, strong men, carefully selected from the rest of the regiment. It always occupies its place on the left of the battalion until called for. When the call sounds, the light company orders arms and unfixes bayonets without word of command, and remains in readiness to move.

Light Marching Order. A soldier paraded with arms, ammunition, canteen, and haversack, is said to be in light marching order.

Light Troops. By this term is generally meant all troops which are lightly accoutred for detached service.

Light, Velocity of. It has been proven by astronomers that light travels through space with the prodigious, though finite, velocity of 192,500, or nearly 200,000 miles in a second of time, and consequently would pass round the earth in the eighth part of a second. It is also proved, by the phenomena of aberration, that the light of the sun, planets, and all the fixed stars, travels with the same velocity.

Light-armed. Not heavily armed, or armed with *light* weapons; as, light troops; a troop of light horse. See **INFANTRY**, **LIGHT-ARMED**.

Light-ball. See PYROTECHNY.

Light-barrel. See PYROTECHNY.

Ligny. A village in Belgium, in the province of Namur, about 10 miles north-east of Charleroi, famous on account of the battle fought here by the French under Napoleon, and the Prussians under Blücher, June 16, 1815, in which the latter was defeated.

Liguria. In ancient geography, a region of Northern Italy, the land of the Ligurians. It is first mentioned by the early Greek authors as extending as far westward as the mouths of the Rhone, while according to Polybius, its eastern boundary was Pise, and its northern the country of the Arretines. The Ligurians, so often praised by ancient authors for their hardihood and bravery, are generally understood to be those on the south side of the Apennines exclusively. In the time of Strabo these eked out the scanty produce of their stony and sterile soil by hunting and feeding flocks, and thus fostered that vigor of frame and ferocity of disposition which long rendered them the indomitable foes and plunderers of the Romans. They were renowned as slingers and light infantry in the armies of the Carthaginians, and afterwards in those of the Romans. They were conquered by the Romans in 125 B.C. Liguria formed the first point of the Roman province of Gaul; in 1797, in consequence of the conquests of Bonaparte, it was formed into the republic of Liguria.

Limber. To attach to the limbers; as, to limber the gun; to limber up.

Limber-chest. The ammunition-chest placed on the limber of field-pieces.

Limbers. See ORDNANCE, CARRIAGES FOR.

Limenarque (Fr.). An office of distinction, which existed in the Roman empire. The persons invested with it were directed to watch the frontiers of the empire, and they commanded the troops that were employed upon that service.

Limerick. A city of Ireland, chief town of a county of the same name, situated on the Shannon, about 60 miles from its mouth, and 106 miles south-southwest of Dublin. It has always been deemed a place of importance. It was taken by the English in 1174; in 1651 it was taken by Ireton, the son-in-law of Cromwell; in 1690 it was unsuccessfully besieged by King William III. in person; in 1691 it surrendered to Gen. Ginkel, afterwards earl of Athlone. Before the Conquest it was the seat of the kings of Thomond.

Limitary. A guard or superintendent, placed at the confines or boundaries of any kingdom or state.

Limitation of Time of Prosecution. See APPENDIX, ARTICLES OF WAR, 103.

Limites Romani. The name of a continuous series of fortifications, consisting of castles, walls, earthen ramparts, and the like, which the Romans erected along the Rhine

and the Danube, to protect their possessions from the attacks of the Germans.

Limits. In a military sense, is that which bounds or confines; as, the limits of a sentinel's post; the limits of a garrison. An officer in arrest may have his limits extended.

Limoges. A town of France, in the department of the Upper Vienne, on the Vienne. It was besieged and taken by the English in 1370.

Limonite. An iron ore (which see).

Lincelles. In Northern France, where the allied English and Dutch armies defeated the French, August 18, 1798.

Linch-pin. A pin through the end of an axle-arm of an artillery carriage to keep the wheel on. A hook attached to the head of the pin and embracing the axle-arm prevents the pin from being jolted out.

Linch-pin Washer. A ring against which the linch-pin rubs.

Lincoln (anc. *Lindum Colonia*). A city of England, the capital of Lincolnshire, on the Witham. It was at the period of the Conquest rich and populous. It was taken several times by Saxons and Danes. Without Newport-gate, upon Lincoln plain, was fought the battle between the partisans of the empress Maud, commanded by the Earl of Gloucester, and the army of Stephen, in which the king was defeated and taken prisoner, February 2, 1141. Lincoln was the scene of important operations during the civil wars in the reign of King John; and here the party of the Dauphin was completely overthrown by the Earl of Pembroke during the minority of Henry III. During the great civil war the royalists obtained possession of the city, but it was stormed by the Parliamentary army under the Earl of Manchester, May 6, 1644.

Linden-tree. The wood used in artificial fireworks, etc.

Lindisfarne. See HOLY ISLAND.

Line. Various opinions have been given as to what portion of the military establishment should constitute the *line* of the army, and in the absence of legislation, which should settle the question, it will continue to be a subject of controversy, and some difficulty has arisen from the vague and uncertain meaning of the words "line of the army," which neither in the English service nor in the United States have a well-defined meaning. The opinion that the words are intended to distinguish the regular army from the militia, or discriminate between officers by brevet and those by ordinary commissions, as understood by some, would seem to be erroneous. Though the words "line of the army" may sometimes be used in a different sense, the opinion prevails that in the 122d Article of War they are used to designate those officers of the army who do not belong to the staff, in contradistinction to those who do. It is now generally conceded that the law contemplates that the fighting portion of the army; as cavalry, artillery, infantry, and engineers, or that

part of the service organized or subdivided into units for command, as well as the commanders thereof, constitutes the "line of the army." The four arms of the service above mentioned form the principal part of a mobilized army, and as they are always formed into a line of battle to resist the attack of an enemy, or to make an attack, they are generally known as the "line of the army," or "troops of the line," to distinguish them from other bodies of men who form parts of an army.

Line. In the British service, the regular infantry of an army, as distinguished from militia, volunteer corps, artillery, cavalry, etc.

Line. In tactics, a body of men in either one or two ranks; generally a body of troops drawn up with an extended front. *To line*, is to place troops in line (see **ALIGN**); thus, *to line* hedges or walls, is to place troops behind them. *To form the line*, in land tactics, is to arrange the troops in order of battle, or battle array. *To break the line*, to change the direction from that of a straight line, in order to obtain a cross-fire, and for other purposes. *To line a street or road*, is to draw up any number of men on each side of the street or road, and to face them inwards. This is frequently practiced on days of ceremony, when some distinguished person is received with military honors on his way through places where troops are stationed. This is the usage also in funerals, when the corps under arms form a line facing inwards.

Line. In fencing, an imaginary line opposite to the fencer, wherein the shoulders, right arm, and the sword should always be found, and wherein are also to be placed the two feet at the distance of 18 inches apart. In which sense a man is said to be in his *line*, or to go out of his line, etc.

Line. A cord or rope; as, a picket line, side lines (which see).

Line, Horizontal. A line parallel to the plane of the horizon; as, any line in the level surface of a plane.

Line, Inclined. Is a line which is oblique to the plane of the horizon.

Line, Magistral. See **MAGISTRAL LINE**.

Line, Oblique. A straight line which is neither parallel nor perpendicular to another line; also a line of troops posted or marching obliquely.

Line of Battle. The position of troops drawn up in their usual order without any determined manœuvre.

Line of Counter-approach. A sort of trench which the besieged make, and push forward from the glacis, for the purpose of counteracting the enemy's works.

Line of Defense. See **DEFENSE, LINE OF**.

Line of Demarcation. A line which is drawn by consent, to ascertain the limits of lands or territories belonging to different powers.

Line of Direction. In gunnery, was a line formerly marked upon guns, by a short point upon the muzzle, and a cavity on the

base-ring, to direct the eye in pointing the gun.

Line of Duty. An officer or soldier disabled while performing properly authorized duty is said to be injured in line of duty, and as such is entitled to the allowances fixed by law.

Line of Fire. In gunnery, the axis of the gun produced.

Line of Fire. In fortification, this term admits of two distinct acceptations: first, when it is found necessary to give an idea of the manner in which a rampart or an intrenchment covers any space of ground by the discharge of ordnance or musketry, lines must be drawn to express the distances traversed by the shot, etc. These lines are called lines of fire, being representations of the actual ranges; second, all that extent of a rampart or intrenchment from which the projectiles of ordnance or musketry are discharged, is understood to be the line of fire.

Line of Least Resistance. The shortest distance from the centre of the charge of a mine to the open air.

Line of March. Arrangement for marching. Course or direction taken by an army.

Line of Metal. Or natural line of sight, is a line drawn from the highest point of the base-ring or base-line to the highest point of the swell of the muzzle, or to the top of the sight, if there be one. The line of sight nearest to the axis of the piece is the *natural* line of sight, the others are *artificial* lines of sight. See **ARTIFICIAL LINE OF SIGHT**.

Line of Sight. See **LINE OF METAL** and **POINTING**.

Line of the Bastion, Capital. Is a line which bisects the salient angle of a bastion. See **CAPITAL**.

Line, Retiring. A line of troops in orderly retreat.

Line, Tangent. A straight line, which meets a curve at one point and touches without cutting it.

Line, Vertical. A line which is perpendicular to the horizon. Of this description are all lines that express height or depth.

Lineal, or Linear. Pertaining to length; pertaining to the line of an army.

Lineal Rank. Is the rank of a line-officer in his arm of the service.

Linear Promotion. Is promotion of line-officers according to seniority in the arm of service, as opposed to promotion in the regiment.

Line-firings. This term is used when troops fire by line.

Lines. A series of field-works, either continuous or at intervals. The former are connected by means of curtains or straight walls. The rule in constructing the other is, that the works shall be within cannon- or musket-shot range of each other, according to their armament.

Lines, Close and Open. Formerly when troops were drawn up in order of battle with intervals between the battalions and squadrons, the lines were said to be close and open.

Lines, Continued. A continued line of field-works constructed for the defense of a position.

Lines Cremaillere. Are composed of alternate short and long faces at right angles to each other.

Lines, Full or Close. Are lines of men drawn up without leaving intervals between them.

Lines, Inside. Are a kind of ditches towards the place, to prevent sallies, etc.

Lines of Bastion. As the name indicates, are formed of a succession of bastion-shaped parapets, each consisting of two faces and two flanks, connected by a curtain.

Lines of Circumvallation. The defensive works by which a besieging army covers its rear and flanks against a relieving force.

Lines of Communication. Are trenches that unite one work to another, so that men may pass between them without being exposed to the enemy's fire; hence, the whole intrenchment round any place is sometimes called a line of communication, because it leads to all the works.

Lines of Communication. This term is applied to all the practicable routes and roads connecting the different parts of an army occupying the theatre of war. Therefore, as the army moves from its base, the lines of operations become lines of communication, and since these "lines of operations" are generally the longest and most important lines of communication, it is to them that the simple term "communications" generally refers. All the routes used by the trains employed in provisioning an army, form a part of the communications. The most important, safest, and most convenient of these routes, all other things being equal, will be the central one, or the one leading from the centre of the army back to its base. This particular route is sometimes designated as the "line of supplies."—*Prof. J. B. Wheeler.*

Lines of Contravallation. See CONTRAVALLATION.

Lines of Operations. The roads or routes by which an army moves from its base towards its objective-point have been designated by the term "lines of operations." Lines of operations are classified from their number into *single*, *double*, or *multiple* lines; from their positions with respect to the lines of operations of the enemy into *interior* or *exterior* lines; and from their position with respect to each other into *convergent* or *divergent* lines. Other classifications are sometimes used descriptive of the nature or other quality of the line.

Single Line of Operations.—An army moving in a given direction with all its parts united, or with those parts so situated that they can be readily joined when required, is said to use a "single line of operations." Sometimes this line is called a *simple* line. A single line of operations does not mean a *single road*, but embraces all the roads or routes taken by the fractions of the army for the purpose of reaching a common point of

concentration; the condition being imposed that these roads shall not be so far apart, or have intervening such obstacles, that the different parts of an army will be prevented from uniting at any given time which may be appointed.

Double and Multiple Lines of Operations.—When there are obstacles intervening between the roads or routes passed over by an army, or the roads are so far apart as to prevent the parts of the army from being readily united, the army is then said to employ "double" or "multiple" lines of operations.

Interior Lines of Operations.—If these lines are within those employed by the enemy, they are known as "interior" lines.

Exterior Lines of Operations.—If these lines are outside of the lines employed by the enemy, they are called "exterior" lines.

Convergent Lines of Operations.—If these lines of operations start from points some distance apart, approach each other, and meet at some point in advance, they are called "convergent." Sometimes the term "concentric" is employed to designate them.

Divergent Lines of Operations.—These lines are the reverse of convergent lines, as they continue to separate, or the distance between them to widen, as the army advances. The term "eccentric" is also applied to them.

Accidental Lines of Operations.—Lines of operations are sometimes employed different from those proposed in the original plan of campaign. To these lines the term "accidental" is applied. It does not follow that their adoption is a matter of accident, as might be inferred from their name. They are frequently the result of a change in the original plan, which probable change was foreseen and provided for.

Temporary Lines of Operations.—Sometimes an army in making a movement employs a line which deviates from that adopted in the general plan of campaign. As soon as the movement is completed the original lines are resumed. Such line adopted for such movement is termed a "temporary line." The term "manœuvre line" is also applied to it.—*Prof. J. B. Wheeler.*

Lines of Retreat. The roads passed over as the army advances are ordinarily the roads taken when the army retires or is driven back. In the latter case they are known as "lines of retreat," and are "single," "double," "diverging," etc., according to their number and position.—*Prof. J. B. Wheeler.*

Lines of Tenailles. Consist of parapets, forming a series of salient and re-entering angles.

Lines of Torres Vedras. See TORRES VEDRAS.

Lines Outside. Are a kind of ditches towards the field, to hinder relief, etc.

Lines, Strategic. The lines followed by an army in making a strategic movement are called "strategic lines." Tempo-

rary lines of operations, or manœuvre lines, therefore, are strategical lines. Lines of operations are important strategical lines. And in general, lines connecting two or more strategical points, which lines can be used by an army, and which allow of easy communication between these points, are "strategical lines." A base of operations is therefore a strategical line. — *Prof. J. B. Wheeler.*

Lines with Intervals. One or more rows of field-works with large intervals between them, through which the offensive may be assumed.

Linesmen. In the British service, infantrymen of the regular army are so called.

Lingerer. One who pretends to be indisposed, in order to avoid his tour of duty, — a skulker. Hence the term *malingering*, or a soldier who avoids duty in a disreputable manner.

Linlithgow-bridge. Near Edinburgh, Scotland, near which the forces of the Earl of Angus, who held James V. in their power, defeated the forces of the Earl of Lennox, who, after receiving promise of quarter, was killed by Sir James Hamilton, 1526.

Linstock. A short staff of wood, about 8 feet long, having at one end a piece of iron divided into two branches, each of which has a notch to hold a lighted match, and a screw to fasten it there, the other end being shod with iron to stick into the ground.

Linstock Socket. A socket attached to the piece in which the linstock was formerly carried.

Lipan Indians. A warlike tribe of aborigines residing in Texas and Mexico.

Lippe, or Lippe Detmold. A small principality of Northwest Germany, the chief part of which is comprised between Prussian Westphalia, Hanover, and the principality Pyrmont. The surface is hilly, partly covered by the Teutoburger Wald, where Arminius exterminated the legions of Varus.

Lis (Fr.). A warlike machine was formerly so called. It consisted of a piece of wood or a stake, about the size of the human body, which was made smaller at the top than at the bottom, and resembled a lily not yet blown. Several of these were tied together with osier or willow twigs, and were used for the security of a camp. They were not unlike the palisades of the present day.

Lisaine. A small river in France, rising in the Vosges Mountains, and flowing west of the fortress of Belfort. On January 15, 16, and 17, 1871, a terrible contest raged here between the French army under Bourbaki and the Germans under Von Werder, the French being finally compelled to retreat. The German loss was about 2000; the French about 6000.

Lisbon. The capital of Portugal, situated on the north bank of the Tagus, near its mouth in the Atlantic. In 1807 it was occupied by the French, and was afterwards the scene of important operations between

the British and French armies, until the latter were finally driven from Portugal.

Lisburn. A town of Ireland, in the county of Antrim, on the Lagan, 8 miles southwest from Belfast. It was founded in 1627, and in 1641 was laid in ashes by the Irish insurgents. It was again burnt in 1707.

Lisieux. A town of France, in the department Calvados, situated near the confluence of the Orbec and the Tanque. The Normans pillaged it in the 8th century, and retained it for a considerable time. It has since been frequently besieged and captured, and was last taken by Henri Quatre in 1588.

Lisle, or Lille. A city of France, formerly the capital of French Flanders, and now of the department of the North. It was founded in 1009 by Bandouin IV., count of Flanders. It fell into the power of Philip the Fair, after a siege of three months, in 1297, and was taken again by Guy, count of Flanders, in 1802. The Protestants attempted in vain to surprise it in 1581, and the French besieged it without success in 1645. Wrested from the Spaniards by Louis XIV. in 1667, and retaken by the allies in 1708, after a long and obstinate siege, it was ceded to France by the treaty of Utrecht. The Austrians bombarded it from September 29 till October 6, 1792, but the garrison, admirably supported by the bravery of the inhabitants, compelled them to raise the siege.

Lissa. A town of Prussian Poland, near the borders of Silesia. This place was laid in ruins by the Russian army in the campaign of 1707.

Lissa. A mountainous island of Austria, in the Gulf of Venice, near the coast of Dalmatia, held by the British from 1810 to 1815. Near here the Italian fleet, commanded by Persano, was defeated with severe loss by the Austrian fleet, commanded by Tegethoff, July 20, 1866.

List. A roll or catalogue; as, the army list, the pay list, etc.

List. A line inclosing or forming the extremity of a piece of ground, or field of combat; hence, in the plural (*lists*), the ground or field inclosed for a race or combat. *To enter the lists*, to accept a challenge, or engage in a contest.

List. To engage in the public service by enrolling one's name, as soldiers; to inclose for combat; as, to list a field.

Litana Silva (now *Silva di Luge*). A large forest on the Apennines, in Cisalpine Gaul, southeast of Mutina, in which the Romans were defeated by the Gauls, 216 B.C.

Litter (Lat. *lectica*, from *lectus*, "bed"). According to Rees's Cyclopædia, a kind of vehicle borne upon shafts, anciently esteemed the most easy and genteel way of carriage. It was much in use among the Romans, among whom it was borne by slaves kept for that purpose, as it still continues to be in the East, where it is called a *palanquin*. The invention of litters, according to Cicero, was owing to the kings of Bithynia. In the time

of Tiberius they had become very frequent at Rome, as appears from Seneca. Horse-litters were much used in Europe prior to the introduction of coaches. In the military service the litter is a species of hurdle bed, on which the wounded are sometimes carried from the field of battle. What is known as the hand-litter or stretcher is used to carry men from where they fall in battle to field hospitals. The hand-litter or stretcher is generally constructed with canvas about 6½ feet long by 3 feet wide, the sides securely fastened to two hard-wood poles about 8 feet in length; the two cross-pieces should be constructed so that the litter can be rolled up. Small outlying bodies of troops, especially detachments of cavalry, are not always provided with them; for these the hand-litter, made with guns and blankets, has been extemporized; for this purpose the edges of the blanket are rolled over the guns, and tied firmly with twine, and two stout sticks are also tied across at the head and foot, serving as handles for the bearers. This being laid on the ground, the wounded man is placed upon it, with his knapsack under his head. The Indian litter is made by taking two stout saplings, and attaching to them three cross-pieces, about 2½ or 3 feet apart, by cords and notches; the sick or wounded man being placed on his blanket, this frame-work is placed over him, and the blanket knotted to it. By three bent twigs and an additional blanket, a kind of top can be made to this in case of a storm. Several kinds of horse or mule litters for frontier service have been invented, but none seem so well adapted for all purposes as the one invented by Surgeon J. C. Baily, U.S.A. Ambulance litters are so constructed as to be drawn from the ambulance and taken to the wounded man, who is by it conveyed to the vehicle. It is then slid into place on rollers, and steadied by loops and guys.

Little Fortification. The first division of the first system of Vauban, and is so called when the exterior side of a fortification does not exceed 350 yards. It is used in the construction of citadels, small forts, horn- and crown-works.

Living Force. *Vis viva.* That force of a body in motion which determines the work of which it is capable. Living force is measured by the product of the mass into the square of the velocity.

Livonia. A Russian province on the Baltic Sea, first visited by some Bremen merchants about 1158. It has belonged successively to Denmark, Sweden, Poland, and Russia. It was finally ceded to Peter the Great in 1721.

Liziere. The berme of a parapet. See **BERME.**

Llandeweyer. In Caermarthenshire, Wales. Here Llewellyn, prince of Wales, having descended into the plains, was surprised, defeated, and slain by the lord-marchers, December 11, 1282. This disaster led to the subjugation of Wales in 1283.

Llerena. An ancient town of Spain, in the province of Estremadura, 59 miles north from Seville. Near this place, the English under Combermere defeated the French under Drouet in 1812.

Load. The charge of a fire-arm; as, a load of powder.

Load. To place a charge in; to charge, as a gun, with powder, or with powder and shot, or ball.

Load. A word of command given when men are to charge their guns or rifles.

Loading. The process of loading field-shells is as follows: They are set up on their sabots, the charges measured out in the proper powder-measure, and poured in through a copper funnel. The fuze-plugs are then driven in with a mallet, allowing the tops to project about 0.1 inch, care being taken not to split them. The holes in the plugs are then carefully reamed out, and stopped with tow wads, which are pressed in firmly with a round stick.

Process of loading spherical case-shot: The shot having been cleaned, the balls are put in. A stick with a less diameter than the fuze-hole, and having a groove on each side of it, is inserted and pushed to the bottom of the cavity by working the balls aside. The shot is then placed in a sand-bath or oven, and brought to a proper temperature to receive the sulphur, which, in a melted state, is poured in to fill up the interstices between the balls; the shot is allowed to cool and the sulphur to harden, when the stick is withdrawn, and the sulphur adhering to the sides of the eye and the surface of the shot is removed. If a fuze-plug and paper fuze are to be used, the charge is poured in, and the plug inserted exactly as in case of a shell; but, if the Bormann-fuze is to be used, the charge is inserted, and the stopper and fuze screwed into their places, care being taken before placing the fuze in position to puncture the covering of the magazine, so that the fire can communicate with the charge. Spherical-case are now usually loaded by putting in the bullets and pouring melted sulphur or rosin in until the case is full. After the sulphur has cooled, the space for the powder is bored out by a cutter, which removes both the sulphur and portions of the bullets from the space. This is a quicker method, and gives a more compact projectile. Case-shot for rifle guns are filled in a similar manner. The object of the sulphur or rosin is to solidify the mass of bullets, and preventing them from striking by their inertia against the sides of the case, and cracking it, when the piece is fired. Coal-dust is sometimes used instead of sulphur or rosin. Round, leaden balls, seventeen to the pound, are used.

Process of filling mortar-shells: Having been inspected to see that they are clean, dry, and in good order, place them on a block made for the purpose, or on rings of rope, or in indentations in the floor of the

magazine, or on the ground with the fuze-holes up. The charge measured out in a powder-measure is poured in through a funnel, and any incendiary composition, such as pieces of port-fire, rock-fire, etc., is inserted. In the mean time the fuze is cut to the proper length according to the range, by resting it in a groove made in the block, or inserting it in a hole made in a block or in a post, and sawing it across with the fuze-saw; or the fuze may be bored through with a gimlet perpendicularly to the axis at the proper point. The fuze is then tried in the fuze-hole, and should enter three-fourths of its length. If it does not, it may be reduced by rasping. The head of it is covered with tow to prevent the breaking of the composition, the fuze-setter placed on, and the fuze driven with the mallet until the head projects not more than 0.2 inch to 0.4 inch above the surface of the shell. These shells are generally filled and the fuzes driven in the battery magazines, as they are required. Shells for heavy guns are loaded in the same way as mortar-shells; but as paper fuzes inserted in wooden or bronze fuze-plugs are used instead of wooden fuzes, the plug only is driven into its place, and stopped with tow after the bursting charge has been poured through it into the shell.

Loading-bar. A bar used to carry shot. It is passed through the ring of the shell-hooks; also called *carrying-bar*.

Loading-tongs. A pair of tongs used with siege howitzers to set the shell home.

Loano. A town of Italy, in the province of Genoa, situated on the Gulf of Genoa. Here the Austrians and Sardinians were defeated by the French, under Masséna, November 28, 1795.

Lobau. An island of Lower Austria, in the Danube, 5 miles east-southeast of Vienna. Here the French, in 1809, remained intrenched for six weeks, between the battles of Gross-Aspern and Wagram.

Lobbes. A town of Belgium, 10 miles southwest from Charleroi, on the Sambre. This was the scene of an engagement between the Austrian and French troops in 1794.

Local Rank, or Temporary Rank. An officer who receives increased rank, for a limited period or during the performance of some specific duty, is said to have local rank. Also sometimes applied to the rank held by an officer who is assigned to duty by his brevet rank to a locality fixed by geographical limits, such as a military department or district. See **BREVEY RANK**.

Lochaber-axe. A formidable weapon of war, consisting of a pole bearing an axe at its upper end, formerly used by the Scotch Highlanders.

Lochage. In Greek antiquity, an officer who commanded a cohort.

Lochleven Castle. In Scotland, built on an isle in Loch Leven, it is said by the Picts. It was besieged by the English in 1801 and

in 1884. The Earl of Northumberland was confined in it, 1569. It was the place of Queen Mary's imprisonment in 1667.

Lock. That part of a fire-arm by which fire is produced for the discharge of a piece. The first form of the apparatus was the *match-lock*, which consisted of a lever holding a lighted match, which by a simple mechanism was brought in contact with the priming. This was superseded by the *wheel-lock*, invented in Nuremburg, or Italy, according to different authorities, which made its appearance early in the 16th century. This consisted of a wheel wound up against a spring and released by a trigger. In its revolution it evolved sparks by friction against an alloy of iron and antimony, which fell upon and ignited the priming. This was replaced about 1680 by the *flint-lock*, consisting of a hammer, or cock, holding a flint, which in its descent struck a steel plate. This device gave way in its turn, about 1840, to the *percussion-lock*, which, in one or another of its many forms, promises to endure indefinitely. The terms *match-lock*, *flintlock*, *firelock*, etc., have also been used to designate the weapon itself.

Lock. In fencing, to seize, as the sword-arm of an antagonist, by turning the left arm around it, in order to disarm him.

Lock-chain Bridges. See **ORDNANCE, CONSTRUCTION OF, THE CAISSON**.

Lock-chain Hooks. See **ORDNANCE, CONSTRUCTION OF, THE CAISSON**.

Lock-chains. Are chains used to lock the wheels of field- and siege-carriages, or to prevent them from turning. For siege-carriages the chain has a shoe at the end, which goes under the wheel and lifts it from the ground. In field-carriages the chain is passed around one of the feloes and secured to itself by a key. In both carriages the chain is secured to the stock by an assembling-bolt.

Lock-chains. See **ORDNANCE, CONSTRUCTION OF, THE CAISSON**.

Locket. The chape of a sword-scabard.

Locking-plates. Are thin, flat pieces of iron on the sides of a field-carriage, where the wheels touch it in turning, to prevent the wearing of the wood in those places. These plates are commonly called wheel-guard plates.

Lock-plate. The plate in a small-arm which covers the lock and to which the mechanism is attached.

Lockspit. In field fortification, a small out or trench made with a spade, about a foot wide, to mark out the first lines of a work.

Lock-step. A mode of marching by a body of men going one after another as closely as possible, in which the leg of each moves at the same time with and closely follows the corresponding leg of the person directly before him.

Locri, or Locri Epizephyrii (now *Motta di Burzano*). A town of the Greek Locrians in Italy, on the southeast coast of the Brutian peninsula. An important event in its

history is the battle at the river Sagras, in which 10,000 Locrians and a few Rhegian auxiliaries defeated, with great carnage, an army of 180,000 Crotoniats. They were allies of the Romans against Pyrrhus; but after the battle of Canne, 216 B.C., revolted to the Carthaginians, and did not resume the yoke of Rome until 205 B.C. From this period Locri seems to have gradually declined in importance.

Lodge Arms. An old word of command, which was used on guards and pickets for the men to place their arms in front of the guard-house or quarter-guard.

Lodge, Indian. See WIGWAM.

Lodge-pole. Is a pole used by Indians in the construction of their teepees. It is generally of mountain pine or ash, about 30 feet long; 2 to 2½ inches at the butt, and 1½ inches at the other extremity. Lodge-poles are also used by the Indians to construct their *travaux*, to convey their wounded, camp equipments, etc. See TRAVOIS.

Lodging Allowance. In the British army, a money allowance given under certain circumstances to officers and men for whom there is no accommodation in barracks to provide lodgings for themselves. Married sergeants and private soldiers, who are married "with permission," are entitled to lodging-money at various rates up to 8 shillings a week, when separate rooms in barracks cannot be spared for the accommodation of each couple.

Lodgment. Is a work made by the besiegers in some part of a fortification, after the besieged have been driven out, for the purpose of maintaining it, and to be covered from the enemy's fire. It also means a footing obtained inside of an enemy's works.

Lodgment. See INJURIES TO CANNON.

Lodi. A town of Italy, in the province of Lombardy, stands on the right bank of the Adda, 19 miles south of Milan. Lodi is celebrated for the victory of the French under Bonaparte over the Austrians, on May 10, 1796, when the long and narrow bridge was carried by the French column, notwithstanding a tremendous fire from the Austrian batteries.

Logement (Fr.). Means generally any place occupied by military men, for the time being, whether they are quartered upon the inhabitants of a town, or are distributed in barracks. When applied to soldiers that have taken the field, it is comprehended under the several heads of huts, tents, etc.

Logistics. Is properly that branch of the military art embracing all details for moving and supplying armies. It includes the operations of the ordnance, quartermaster's, subsistence, medical, and pay departments. It also embraces the preparation and regulation of magazines for opening a campaign, and all orders of march and other orders from the general-in-chief relative to moving and supplying armies. Some writers have, however, extended its signification to embrace strategy.

Logrono. A town of Spain, the capital of a province of the same name, in Old Castile, situated on the Ebro. In 1808 and 1828 it was occupied by the French, being of importance as a military post.

Loigny. A village in France, department of Loiret, about 9 miles from Orleans. During the Franco-German war, the army of the Loire under Gen. Chanzy was defeated near here by the Germans under the Grand Duke of Mecklenburg, December 2, 1870.

Lombard. A form or size of cannon formerly in use.

Lombards or Longobards. A German people of the Suevic family, not very numerous, but of distinguished valor, who played an important part in the early history of Europe. About the 4th century they seem to have begun to leave their original seats (on the Lower Elbe, where the Romans seem to have come first in contact with them about the beginning of the Christian era), and to have fought their way southward and eastward, till they came into close contact with the eastern Roman empire on the Danube, adopted an Arian form of Christianity, and after having been some time tributary to the Heruli, raised themselves upon the ruins of their power, and of that of the Gepidæ, shortly after the middle of the 6th century, to the position of masters of Pannonia, and became one of the most wealthy and powerful nations in that part of the world. Under their king Alboin they invaded and conquered the north and centre of Italy (568-569), and founded the kingdom of Lombardy. The nobles ravaged the greater part of Italy subsequent to 578, but in 584 they appointed Autharis their king, who greatly extended the empire, and formed a powerful kingdom. In the autumn of 778, Charlemagne invaded Italy; and in May of the following year Pavia was conquered and the Lombard kingdom, after an existence of 206 years, was overthrown. In 776, an insurrection of some of the Lombard nobles brought Charlemagne again into Italy, and their dukedoms were broken down into counties, and the Lombard system, as far as possible, supplanted by that of the Franks. In 808, a treaty between Charlemagne, the Western, and Nicephorus the Eastern emperor, confirmed the right of the former to the Lombard territory.

Lombardy. The name given to that part of Upper Italy which formed the nucleus of the kingdom of the Lombards (which see). It consisted of the whole of Italy north of the peninsula, with the exceptions of Savoy and Venice, and after the fall of the Lombard kingdom, in 774, was incorporated in the Carolingian empire. In 843 it was created a separate kingdom, but was not entirely severed from the Frankish monarchy till 888. From this time it was ruled by its own kings till 961, when it was annexed to the German empire. Out of the wrecks of the old independent kingdom now

arose a number of independent duchies, as Friuli, Mantua, Susa, Piedmont, etc., and soon afterwards the republics of Venice, Genoa, Milan, and Pavia, etc. The Lombard cities declared themselves independent towards the commencement of the 12th century, and in 1167 were joined by their less powerful neighbors in the "first Lombard league," for the maintenance of their liberties against Frederic Barbarossa, whom they severely defeated in 1176. In 1225 they were compelled to form the "second Lombard league" against Frederick II., and with similar success. After this, petty tyrants rose in most of the cities, and foreign influence quickly followed. The Guelph and Ghibelline factions greatly distracted Lombardy; and from the 15th century to the present time it has been contended for by the German and French sovereigns. The house of Austria obtained it in 1748, and held it till 1797, when it was conquered by the French, who incorporated it into the Cisalpine republic, and in 1805 into the kingdom of Italy. On the breaking up of the French empire in 1815, the Lombardo-Venetian kingdom was established by the allied sovereigns and given to Austria, who had lost her Flemish possessions. In 1859 this union was dissolved by the Italian war; and also by the treaty of Villa Franca, ceded to the king of Sardinia.

Lomond, Loch. The largest and most celebrated of the Scottish lakes, separating the counties of Dumbarton and Stirling. In 1268 the Norsemen, under Angus, king of Man, after having ravaged the shores of the adjoining Loch Long, drew their boats over the neck of land which separates the two waters at Tarbet, massacred the inhabitants, and set fire to the numerous villages they found on the shores of the lake. After this expedition, the loch came into the hands of some of the chief Highland clans, who long carried on their feuds here.

Lomza. A district town in the government of Augustovo, in Poland, on the left of the Narev, a tributary of the Vistula. It played a prominent part in the history of Poland, but has never recovered from its sufferings during the Swedish wars.

Lonato. A town of Northern Italy, province of Brescia; it is surrounded by walls, and further defended by a citadel. It suffered greatly during the Middle Ages by pestilence. Here Bonaparte gained a victory over the Austrians in 1796.

London. The capital and chief city of the British empire, stands on both banks of the Thames, about 60 miles from the sea. It appears first in history under the reign of Claudius, and it was fortified under Constantine the Great. Boadicea, queen of the Icenii, reduced London to ashes, and put 70,000 Romans and strangers to the sword in 61; it was rebuilt and walled in by the Romans in 806; pillaged by the Danes in 889. In 1875 its population was 3,445,160.

London, New. A city of New London

Co., Conn., situated 42 miles southeast from Hartford, on the Thames. This place was burned by the British in 1781.

Londonderry. The capital of a county of the same name in Ireland, on the Foyle. This town is of great antiquity, and has often suffered from the effects of war. It was besieged by James II., from December, 1688, till August, 1689, when the siege was raised.

Long Island. An island about 115 miles long, which is separated from New York by the East River, a strait about half a mile wide. Its capital is Brooklyn (which see), where was fought in 1776 the first pitched battle of the Revolutionary war, the result being the defeat of the Americans. The island suffered considerably at the hands of the English during this war. During the civil war (1861-65) Long Island took an active part in aid of the cause of the Union.

Long Roll. See ROLL, LONG.

Long-bow. A bow of the height of the archer, formerly used in England for war and sport.

Long-jawed. The state of a rope when its strands are straightened by being much strained and untwisted, and from its pliability will coil both ways.

Longitudinal Strain. The strain on a cannon or fire-arm which tends to part it with a ring fracture. See ORDNANCE, STRAINS UPON.

Longwy. A strongly fortified town of France, in the department of the Moselle, 88 miles northwest from Metz. This is called the "iron gate of France," and was in 1792 taken by the Prussians, and again by the allies in 1815.

Looking-glass Signaling. A method of signaling invented and extensively used by the North American Indians, both on the Plains and in the regions west of the Rocky Mountains. The reflection of the sun is flashed from a small piece of a mirror held in the hand. Indians have been known to communicate over a distance of several miles by this means. It is also extensively used in their drills,—the chief often directing the movements of his warriors with the greatest ease and certainty from a distant point overlooking the field. This method of signaling, modified by the resources of science, has been lately introduced into the English service, and used both in India and Southern Africa. A concave mirror is used, and an artificial light replaces the sun when he is absent. The method has been called heliography.

Loop-holed Galleries. Are vaulted passages or casemates, usually placed behind the counterscarp revetment, and behind the gorges of detached works, having holes pierced through the walls, to enable the defenders to bring a musketry fire from unseen positions upon the assailants in the ditch. Loop-holes, however, are not confined to galleries. In modern fortifications, the revetments, both scarp and counterscarp, are very generally pierced for musketry fire.

Loop-holes. Apertures in a wall or stockade, through which a fire of musketry may be directed on the exterior ground.

Loose. Not close or compact. "With horse and chariots ranked in loose array."

Loosen, To. To open ranks or files from close order. To loosen is, in fact, to lose that firm continuity of line or perpendicular adherence, which constitutes the true basis of military operations. The lock-step was introduced for the purpose of counteracting the mischievous effects of loose marching, but it produced a greater inconvenience, and has therefore been laid aside; the equal pace and marked time correct both.

Loot. An East Indian term for plunder or pillage.

Looties, or Lootees. An East Indian term for a body of irregular horsemen, who plunder and lay waste the country, and harass the enemy in their march.

Lootywallow. An East Indian term of the same import as *looties*.

Lorarii. Among the Romans, officers whose business it was, with whips and scourges, to compel the gladiators to engage. The *lorarii* also punished slaves who disobeyed their masters.

Lorca. A town of Spain, in the province of Murcia, on the Corners. This town is remarkable in history as having been the key of Murcia during the Moorish wars; being situated on the frontiers of Granada, it was often taken and retaken. It suffered greatly from military violence during the French occupation in 1810.

Lord-Lieutenant. In Great Britain the lord-lieutenant of a county is a permanent provincial governor appointed by the sovereign by patent under the great seal. He is the permanent local representative of the crown, who, on the occasion of an invasion or rebellion, has power to raise the militia, form regiments, troops, and companies, and give commissions to officers. He is also the head of the magistracy, the militia, and the yeomanry; he nominates officers of militia and volunteers, and is the chief executive authority.

Lord-Lieutenant of Ireland. The viceroy or deputy of the sovereign, to whom the government of Ireland is committed. The office has existed from a remote period, the appointment having been made under different designations. The lord-lieutenant is appointed under the great seal of the United Kingdom, and bears the sword of state as the symbol of his viceregal office. He has the control of the police, and may issue orders to the general commanding the troops for the support of the civil authority, the protection of the public, the defense of the kingdom, and the suppression of insurrection. He also has the power to confer knighthood.

Loreto, or Loretto. A fortified city of Italy, in the province of Macerata, situated 14 miles southeast from Ancona. This place was taken by the French in 1797.

Lorica. A cuirass, or coat of mail worn by the Roman soldiers, was made of various materials. The ordinary kind consisted of a skin, or a piece of strong linen covered with small plates of iron, which resembled both in their shape and in their manner of overlapping each other the scales of a serpent or fish. Sometimes cuirasses or hauberks, composed entirely of iron rings linked together, were worn by the Roman *hastati*. A less flexible but more impervious defense was the cuirass made of hard leather or of metal, and consisting of two parts (the one covering the breast and abdomen, and the other the back), united by hinges and leathern thongs.

Lorraine (Ger. Lothringen). A former extensive province of France, included in the departments of Vosges, Meurthe, Moselle, and Meuse. Under the Romans it formed part of the Belgic division of Gaul, and was afterwards united to the empire of Charlemagne. It subsequently became a duchy, and passed into possession of the dukes of the house of Austria. In 1836 it was ceded to Stanislas, ex-king of Poland, and after his death passed to the crown of France, from which it was wrested by the Germans at the close of the Franco-German war, May 10, 1871.

Los Angeles. A city, the capital of a county of the same name, in Southern California, about 350 miles southeast of San Francisco. It was captured from the Mexicans by the combined forces of Gen. Kearney and Commodore Stockton in 1846.

Loss. Killed, wounded, and captured persons, or captured property.

Losses. In the British army there is a regular provision made for indemnification for losses by fire, by shipwreck, in action with the enemy, by capture at sea, by destruction or capture of a public store-house, by the destruction of articles or horses, to prevent their falling into the hands of the enemy, etc. In the United States, it would seem just that Congress should establish some general rule regulating such matters. The principle of settling all such claims by special legislation cannot but bear hardly on a number of individuals, and also probably in the end imposes greater burdens upon the treasury.

Loudon. A parish of Ayrshire, Scotland, 4 miles east from Kilmarnock. In the neighborhood, at Loudon Hall, Bruce, with his forces, encountered the troops of the Earl of Pembroke in 1307.

Loudon-hill. See DRUMCLOG.

Louis, or Knights of St. Louis. The name of a military order in France, instituted by Louis XIV. in 1693. Their collars were of a flame color, and passed from left to right. The king was always grand master.

Louisburg. A famous fortress built by the French soon after the peace of Utrecht (1713) upon the eastern coast of Cape Breton Island. Since the existence of so strong a

place threatened the colonial and English fisheries, it was determined in 1745 by the Legislature of Massachusetts Bay (France and Great Britain being then at war) to strike a blow at the town. Accordingly, a force of colonists consisting of 8250 Massachusetts militia, aided by 616 men from Connecticut and 804 from New Hampshire, set sail in 100 vessels, and landed near the town, April 30, 1745. An active but irregular siege (though the men were without tents and the proper means of conducting such operations) was terminated June 17, 1745, by the capitulation of the French under Duchambon. But the peace of Aix-la-Chapelle (1748) gave back all Cape Breton to France. The town was invested in 1758 by Gen. Amherst with 14,000 British troops, 20 line ships, 18 frigates and other vessels. After a tremendous bombardment, which quite destroyed the town, and breached the walls badly, the garrison and French fleet surrendered July 26, 1758. The English overthrew the fortifications at an expense of \$50,000. The first cost was one hundred times that sum.

Louisiana. One of the Southern or Gulf States of the United States, lying between Arkansas and Mississippi on the north and east, the Gulf of Mexico on the south, and Texas on the west. The country was visited by La Salle, and the mouth of the Mississippi discovered in 1691, and though Iberville attempted to found a colony in 1699, his efforts were not successful. The country was transferred to Spain by France in 1762; restored to France in 1800; and purchased by the United States in 1803. That part of the Territory now known as the State of that name was admitted into the Union in 1812, and was within three years afterwards the scene of the great battle of New Orleans, fought January 8, 1815, between the British troops under Gen. Pakenham, and the Americans under Gen. Jackson, in which the former were defeated with great loss. The State seceded, and was the theatre of many important events during the civil war (1861-65).

Loup des Anciens (Fr.). Was an iron instrument, made in the shape of a tenaille, by means of which they grappled the battering-rams, and broke them in the middle.

Louviers. A town of France, in the department of the Eure, situated on the Eure. It was sacked both by Edward III. and Henry V. of England.

Lover's War. In French history, a name given to a civil war in the year 1580, during the reign of Henry IV. It was so called because it arose from the jealousies and rivalries of the leaders, who were invited to meet at the palace of the queen-mother.

Loyalist. A person who adheres to his sovereign, or to the constituted authority; especially one who maintains his allegiance to his prince or government, and defends his cause in times of revolt.

Lozenge. In heraldry, a charge generally

enumerated among the sub-ordinaries, in the shape of a rhombus placed with the acute angles at top and bottom. The horizontal diameter must be at least equal to the sides, otherwise it is not a lozenge, but a *fusil*. The term *lozenge* is applied to a field divided by diagonal lines crossing one another at regular intervals, so as to form a diamond pattern, the compartments being of alternate tinctures.

Lubeck. One of the three cities of the German empire, situated on the river Trave, about 14 miles from the Baltic. Lubeck has existed since the 11th century, and received important privileges from the German emperors in the 12th century, which were confirmed by the Danes, into whose power it fell in 1201. It was declared a free city of the empire in 1226, and thereafter maintained its independence against the Danes, and joined the other towns in the great Hanseatic League (which see). With the decline of the Hanseatic League, it lost its historic importance, but continued to flourish as an independent city, till it was taken and plundered by the French, November 6, 1806. In 1810 it was incorporated with the French empire, and in 1813 the Russians compelled the French to deliver it to its rightful owners; but the French again occupied it, until it was liberated by Sweden. In 1871 it was annexed to the German empire.

Lubny, or Lubnu. A town of European Russia, government of Poltava, or Pultowa, on the Sula. Charles XII. of Sweden besieged this place for a considerable time, but he did not succeed in taking it.

Lubricant. A greasy substance or mixture of substances placed on the surface or in the cannellures of bullets to lessen friction in the bore. Bayberry tallow, beeswax, Japan wax, stearine, graphite, soapstone, etc., are some of the substances used.

Lucanians. A warlike people of Southern Italy; defeated Alexander of Epirus at Pandosia, 332 B.C.; were subdued by the Romans, 227; revolted after the battle of Cannæ, 216; were reduced by Scipio, 201; again revolted, 90; admitted as Roman citizens in 88.

Luceria (now Lucera). Sometimes called Nuceria, a town in Apulia, on the borders of Samnium. In the war between Rome and Samnium, it was taken by the Samnites, 321 B.C., and next by the Romans, 319; but having revolted to the Samnites in 314, all the inhabitants were massacred by the Romans, and their place supplied by Roman colonists.

Lucknow (Hind. *Laksmanavate*). A city of British India, capital of Oude, situated on the right bank of the Goomty, 610 miles from Calcutta. In 1857, during the Indian mutiny, this place was besieged by the rebels, but was bravely defended by the troops under Sir Henry Lawrence, and afterwards by Gens. Outram and Havelock. The long-suffering troops and English residents were finally relieved by Sir Colin Campbell, who

then effected one of the most masterly retreats on record in the annals of Indian warfare. The British regained possession of it in 1858.

Lucon. A town of France, in the department of Vendée, situated on the edge of a marshy plain. The Republicans sustained a defeat under the walls of Lucon in 1703, and the insurgent Vendéans besieged the place some months afterwards, but without success.

Ludlow. A municipal and Parliamentary borough of England, in the county of Salop, at the confluence of the Corve and Teme. The castle, now a magnificent ruin, was at one time one of the most important strongholds against the Welsh.

Lugo. A town of Italy, in the province of Ravenna. It was sacked and nearly destroyed by the French in 1796.

Lugs. The ears of a bombshell, to which the hooks are applied in lifting it.

Luncarty. A village of Scotland, 4 miles north from Perth, where the Danes were defeated in 990 by Kenneth III.

Lundy's Lane, Battle of. Called also the battle of Niagara, and of Bridgewater, was fought on the Canadian frontier within sight and hearing of the Falls, July 25, 1814. In this contest the American troops, numbering about 4500, commanded by Gen. Brown, succeeded, after a display of desperate valor and perseverance, in repulsing about midnight a body of 7000 British, and capturing one of their generals, Riall, and 7 pieces of cannon. The losses on both sides were nearly equal (about 850 killed, wounded, and missing). During the night the Americans fell back to Chippewa, being unable to convey their trophies with them for want of means of transportation, and in the morning when they advanced to Bridgewater Mills they found the enemy again occupying the battle-ground, in possession of their captured cannon, and having been reinforced too strong to be again dislodged. The Americans thus lost all the substantial fruits of the victory.

Lunge (a corruption of *allonge*). A pass or thrust with a sword; a shove with a boarding-pike.

Lunette. A field-work consisting of two faces forming a salient angle, or one projecting towards the enemy, and two flanks parallel, or nearly so, to the capital or imaginary line bisecting the salient angle. In shape it is like the gable end of a house. It is intended for the defense of avenues, farm-houses, bridges, and the curtains of field-works.

Lunette. An iron ring at the end of the trail of a field-piece, which is placed over the pintle-hook of the limber in limbering up the gun. The term is also applied to the hole through an iron plate on the under side of the stock of a siege-piece, into which the pintle of the limber passes when the piece is limbered.

Lunettons. A smaller sort of lunettes.

Lunéville. A well-built town of France, in the department of the Meurthe. The palace was for many years the residence of Stanislas, king of Poland. The first treaty of Austria and the French republic was signed in this town in 1801.

Lunge. In fencing and bayonet exercise, an extended thrust.

Lunt. The match-cord used for firing cannon.

Lusitania. A district of ancient Hispania, considered in its original meaning as the country of the Lusitani. It now comprises Portugal south of the river Douro, and a large number of provinces in Spain. The Lusitanians, especially those that inhabited the mountains, were much addicted to plunder, were the bravest of all the Iberians, and offered most resistance to the Romans.

Lustration (Lat. *lustratio*). Sacrifices or ceremonies by which the ancients purified their cities, fields, armies, or people, defiled by any crime or impurity. There were several ways of performing lustration, viz., by fire, by sulphur, by water, and by air. The Roman people underwent a lustration in the Campus Martius, after the census, which was taken every five years (*lustrum*), had been completed. In the armies, some chosen soldiers, crowned with laurel, led the victims—a cow, a sheep, and a bull—thrice round the army ranged in battle-array in the field of Mars, to which deity the victims were subsequently sacrificed, after many imprecations had been invoked upon the enemies of the Romans. The Gothic kings abolished these ceremonies when they became masters of Rome.

Lutter. A town of Germany, 28 miles southwest from Brunswick, in the Hartz district. Christian IV., king of Denmark, was defeated near this town by Tilly in 1626.

Lutzen. A small town of Prussia, province of Saxony, famous for two great battles fought in its vicinity. The first took place on November 16, 1632, between the Swedish army under Gustavus Adolphus and the Imperialists under Wallenstein; Gustavus Adolphus was killed, but the victory was gained by the Swedes. The second great battle was fought on May 2, 1813, somewhat farther to the south, at the village of Gröszgörschen. It was the first great conflict of the united Russian and Prussian armies with the army of Napoleon in that decisive campaign. The allies gained at first great successes; but the French were left in possession of the field at the close of the day.

Luxemburg. The capital of the grand duchy of Luxemburg, situated on the Elbe, or Alzette. The Spaniards, Austrians, French, and Dutch, who successively held possession of the town, so increased and strengthened its fortifications that in the beginning of the 19th century it was considered to be, with the exception of Gibraltar, the strongest

fortress in Europe. In 1867 it was declared neutral ground.

Lycaniens (*Fr.*). Hungarian light infantry are so called.

Lydda. An ancient town of Palestine, which stood in the fertile plain of Sharon, about 9 miles from Joppa. It was rebuilt by Hadrian, and its name changed to *Diosopolis*, "the city of Zeus." It was destroyed by a Mongol tribe in 1271. The modern village of Ludd occupies its site.

Lyers, Out-. See **OUT-LYERS**.

Lying. To be actually stationed or quartered in a given place. *In-lying* and *out-lying pickets*. See **PICKET**.

Lying Out of Quarters. See **APPENDIX, ARTICLES OF WAR**, 81.

Lyman Gun. See **MULTI-CHARGE GUNS**.

Lyon, or **Lord Lyon King-at-Arms**. The chief heraldic officer for Scotland, whose title is derived from the lion rampant in the royal escutcheon. The Scottish king-at-arms has, unlike his brother-kings of England, from an early period exercised jurisdiction independently of the constable and marshal, holding office directly from the sovereign by commission under the Great Seal. In early times he was occasionally designated the *Lord Lyon*; but the now

prevalent custom of so calling him seems to have arisen from the circumstance that, since 1796, the office has been held by a peer. According to Nesbet, the Lyon has precedence of all knights and gentlemen not being officers of state, or senators of the College of Justice. Since the Union, he has ranked next to Garter; Clarencieux and Norroy follow; then Ulster; but it has sometimes been maintained that within Ireland, Ulster has place next after Lyon. The Lyon is king-at-arms to the order of the Thistle.

Lyons, or **Lyon** (anc. *Lugdunum*). A city of France, capital of the department of the Rhône, situated at the confluence of the Rhône and Saône. A Roman colony is said to have been established here in 43 B.C. The city was destroyed by fire in the time of Seneca, but was shortly after restored by Nero to its former splendor. It was plundered and again burnt by the soldiers of Septimius Severus, after the defeat of Albinus near it in 197 A.D. In 1793, the city having refused to submit to the Convention, sustained a memorable siege from August 8 to October 9, on which date it was taken, and suffered severely at the hands of the republicans.

M.

McAllister, Fort. A formidable case-mated earthwork, with bombproofs, mounting 9 guns, on Genesis Point, about 6 miles above the mouth of Great Ogeechee River, Georgia, which was erected by the Confederates during the civil war. On January 27, 1863, it was attacked by the ironclad "Montauk," under the command of Capt. John L. Worden, three gunboats, and a mortar-schooner; but after a bombardment of many hours' duration, they failed to reduce it. Another attack was made with like results on February 1, the "Montauk" again participating in it. A third attack was made on March 8, and after a bombardment of eight hours by a fleet of ironclad monitors and mortar-schooners, under the command of Capt. Drayton, they again failed to reduce it. After the naval attacks the fort received additions in armament and garrison, and in 1864 comprised three half-bastions and two curtains, mounted 21 guns, several of which were 8-inch and 10-inch pieces, and was garrisoned by 250 men. On December 18, 1864, it was taken by assault by a division of Gen. Sherman's army under Gen. Hazen, and its entire garrison and stores captured. Communication by water

being thus opened, the capture of Savannah followed on December 21.

Macadamized. A term applied to roads covered with broken stone,—from McAdam, a Scotch engineer, who first introduced this method of road-making.

Macana. The war-club of the South American Indians.

Macassar, or **Mankasser**. The chief settlement of the Dutch in the island of Celebes, and is defended by Fort Rotterdam. In 1810 it surrendered to the British, but was restored to the Dutch in 1814.

Maccabees. A family of patriotic Jews, who commenced their career during the persecutions of Antiochus Epiphanes, 167 B.C., when Mattathias, a priest, resisted the tyranny of the governor. His son, Judas Maccabæus, defeated the Syrians in three battles, 166 and 165 B.C., but fell in an ambush, 161 B.C. His brother Jonathan made a league with the Romans and Lacedæmonians, and after an able administration was treacherously killed at Ptolemais by Tryphon, 143 B.C. His brother and successor, Simon, was also murdered. The history of the Maccabees is contained in five books bearing that name.

Mace. A strong, short, wooden staff, with a spiked metal ball for a head. It was a favorite weapon with knights, with the cavalry immediately succeeding them, and at all times with fighting priests, whom a canon of the church forbade to wield the sword. No armor could resist the force of a well-delivered blow from the mace. The mace is now borne before magistrates as an ensign of authority.

Macedonia. Anciently the name of a country lying north of Thessaly, which was originally of small extent. The history of Macedonia is involved in much obscurity till about 490 B.C., when the Persians subdued it, so that the Macedonian king, Alexander I., was compelled to take part with Xerxes in his invasion of Greece. It again regained its independence upon the retreat of the Persians after the battle of Plataea in 479 B.C. After a period of civil wars Philip II. ascended the throne in 359 B.C., and his son Alexander III., surnamed Alexander the Great, brought half the then known world under his empire; but after his death the Macedonian empire was broken up, and, at the end of a period of twenty-two years of incessant wars, formed into four principal kingdoms under his greatest generals. Macedonia itself fell to the lot of Antipater, after whose death ensued another period of civil wars and contests for the throne. The Macedonians were defeated by the Romans in the great battle of Cynocephalæ, 197 B.C., and their country became subject to the Roman power. After the time of Constantine the country was ravaged by Slavic tribes, and by the 7th century the old semi-Greek Macedonians were extinct, and in the latter ages of the Byzantine empire their place was supplied by colonies from Asia, many of them of Turkish descent.

Macedonian Pike, or Sarissa. A spear or lance of great length used in warfare by the Greeks.

Macerata. A town of Central Italy, in a province (formerly a delegation) of the same name, situated on an eminence between the rivers Potenza and Chienti, 21 miles southwest of Ancona. The place was taken by assault and sacked by the French, in 1799.

Machete (Sp.). A large, heavy knife resembling a broadsword, often 2 or 3 feet in length, used by the inhabitants of Spanish America as a hatchet, to cut their way through thickets, and for various other purposes.

Machicolation. The act of hurling missiles or pouring various burning or melted substances upon assailants through machicolations.

Machicolations. The apertures between the corbels or brackets supporting a projecting parapet; the term is applied also to the parapets. The apertures are for the purpose of allowing projectiles to be hurled at an enemy when he approaches near the wall, as in scaling, undermining, etc. Such

defenses are very common in castellated architecture, especially over gateways, towers, etc.

Machicoulis. The same as machicolation.

Machine Guns. See BATTERY GUNS.

Machine, Infernal. This term has been applied to various deadly contrivances, for instance, to the battery gun with which the attempt to assassinate Louis Philippe was made, as well as to the devices used on similar historical occasions; also to the fire-ship used by the English at St. Malo. This was a three-decker charged with powder on the first deck; shells, carcasses, etc., on the second; and with barrels filled with combustibles on the third; the gun-deck was covered with old guns overloaded. It was intended to destroy ships, bridges, etc.

Machines, Artillery. See IMPLEMENTS.

Machines of War, Ancient. Under this head is comprehended every kind of machine or engine made use of before the invention of gunpowder, for overthrowing, destroying, and burning the defenses of an enemy. They were of three kinds,—the first for projecting arrows, darts, stones, javelins, and fire-arrows; the second for battering and breaching walls, etc.; and the third for covering the troops thus engaged. They are as follows:

Muscule, arbalest, ballista, belfry, belier. (See appropriate headings.)

Bricole, machine for projecting quarrels or darts.

Carreau, catapulta (which see).

Chat, or cat, a covered shed, occasionally fixed on wheels, for protecting soldiers employed in filling up the ditch, preparing the way for the helepole, or wooden tower, or for mining the wall.

Chat echine, prickly cat, beam bristling with oaken teeth, for the defense of a town, by being let down on the besiegers.

Corbeau, long pole armed with a strong iron harpoon or scythe at one end, suspended in a frame placed on a cart; by manœuvring the other end they tore away the machines with which the besieged endeavored to seize the head of the battering-ram.

Corbeau à griffe, pole with strong nippers or pincers, with which any object was seized and lifted up, and afterwards broken, if possible.

Couillard, slide, *jaucslide,* machine for throwing stones.

Cranequin, large stirrupped cross-bow or latch. (See ARBALEST.)

Espringal, falarique, harpe (which see).

Frondebale, long beam moving in a vertical plane between two uprights on an axle (not in the middle); the longer arm was provided with a bag or case containing stones, and sometimes a sling; the other was heavily loaded, the beam being placed horizontally, and suddenly disengaged; the weight on the shorter limb forced up the other, and projected the stones forward.

Helepole. (See HELEPOLIS.)

Herse. (See HERSE.)

Hourdeis, hurdles employed by the besieged to protect their walls from the machines of the enemy.

Lyonnois, machine for defending a breach, with a head like a treble *fleur-de-lis* on wheels.

Mangona, machine similar to the ballista, generic term signifying all kinds of machines.

Mangonel, diminutive of the above, applied to small machines.

For the following machines of war, see appropriate headings: MANTELET, MANUBALLISTE, MATAFUNDA, MATE-GRIFFON, MUCETTE, ONAGRE, PLUTEUS, POLIBOLE, RIBAUDQUIN, SAMBUQUE, SCORPION, TARIÈRE, TESTUDE, TOLENON, TREBUCHET, TREPID, VIGNE, VIRETON.

Maciejovice. Near Warsaw, Poland. Here the Poles were totally defeated, and their general, Kosciusko, taken prisoner, October 10, 1794, after a murderous action. Kosciusko strenuously endeavored to prevent the junction of the Russian and the Austrian armies.

Mackay Gun. This gun is made of wrought iron, and distinguished from the Whitworth and Lancaster guns by the following characteristics: The Whitworth has a hexagonal bore in a tube of homogeneous iron, strengthened with hoops forced on by hydraulic pressure; the Lancaster is without grooves, but the bore is oval; the Mackay has numerous grooves, but the projectile does not, as in other guns, fit into them, its rotation being imparted by the rush of gases through the spiral grooves around it. In every case the groove or oval takes one turn, or portion of a turn, within the gun.

Mackinaw, or Mackinac. Formerly called Michilimackinac, "the great turtle." A town and fort on an island of the same name in Lake Huron, about 820 miles by water north-northwest of Detroit, Mich. It fell into the hands of the English on the conquest of Canada from the French; but the Indians in its neighborhood remained hostile to their new masters. The fort was captured by a ruse, and the inhabitants massacred by the Chippewas under Pontiac, June 4, 1763. It was again garrisoned by the British in the following year. The island came into possession of the United States in 1796, and was captured by the British and Indians July 17, 1812. The Americans attempted its recapture, August 14, 1814, but without success.

Macrones. A powerful and warlike Caucasian people on the northeastern shore of the Pontus Euxinus.

Madagascar. An island of the Indian Ocean, situated at some distance from the east coast of Africa, being separated from that continent by the channel of Mozambique. The French formed several settlements in different parts of the island in 1665, but they were repeatedly driven out

by the natives. The English were also driven out of the island in 1886, and the old system of Fetichism was restored. Madagascar is at present governed by Ranavalona, a Christian.

Made. A professional term for having obtained a commission, or being promoted.

Madras. Called by the natives Chennapatam, a maritime city and fortress of British India, and capital of the presidency of the same name. It was taken by the French in 1744; restored to the English at the peace of Aix-la-Chapelle, in 1749, and was vainly besieged by the French under Lally, December, 1758-59. It is now considered one of the strongest fortresses in India.

Madrid. The capital of Spain, in New Castle, on the left bank of the river Manzanares. It is mentioned in history as *Maje-rit*, a Moorish castle. Madrid was sacked by the Moors in 1109; retaken and fortified by Henry III. about 1400; taken by Lord Galway in 1706; and by the French in March, 1808. The citizens of Madrid attempted to expel the French, and were defeated with much slaughter, May 2, 1808; the French were compelled to retire, but the place was retaken by them December 2, 1808, and retained until Wellington and his army entered it, August 12, 1812.

Madriers. Are long planks of broad wood, used for supporting the earth in mining, carrying on a sap, making coffers, caponiers, galleries, and for various other purposes at a siege; also to cover the mouth of petards after they are loaded, and are fixed with the petards to the gates or other places designed to be forced open. When the planks are not strong enough they are doubled with plates of iron.

Madura. An island of the Malay Archipelago, situated off the northeast coast of the island of Java, from which it is separated by a narrow channel. The Dutch invaded this island about the year 1747, and made slaves of a great number of the inhabitants.

Maestricht. A town of Holland, and capital of the province of Limburg, on the Maas, 110 miles southeast from Amsterdam. This town was taken by the French in 1794; and from 1796 till 1814 it was the capital of the French department of the Lower Meuse.

Magazine. A word derived from the Arabic, *makhzan*, "store-house," means any place where stores are kept; but as a military expression, it always means a store-house for powder, although arms may at times be kept in it. In military structures the magazines must be bomb-proof, and therefore necessitate very thick walls; they must be quite free from damp, and should admit sufficient daylight to render the use of lanterns within generally unnecessary. The entrance is protected by shot-proof traverses, lest an opening should be forced by ricochet shots.

Magazine Guns. Are breech-loading

small-arms having a magazine capable of holding several cartridges which may be fired in quick succession,—the empty shell being ejected and another cartridge conveyed into the breech from the magazine by working the mechanism of the piece. Among American magazine guns, the *Spencer* was one of the first that proved successful, and was extensively used during the war of the Rebellion, 1861–65. The magazine was a tube in the stock. The *Spencer* is no longer made. The *Henry* was a contemporary, and used a tube under the barrel,—this gun as now improved is known as the *Winchester*, and is sold in every part of the globe. The *Ward-Burton* and *Hotchkiss* have tubes, the first under the barrel, the second in the stock like the *Spencer*; they are both *bolt* guns as to breech mechanism. The *Lee* uses as a magazine a kind of pocket between the stock and barrel. This is readily detached. A gun carrying a great number of cartridges is the *Evans*, which has a spiral cartridge-carrier in the stock. Other guns, the *Meigs* and *Cullen*, have been made carrying a still greater number, as many as forty or fifty, but these systems have not met with any considerable success. See **SMALL-ARMS**.

Magdala. A strong mountain fortress in Abyssinia, which King Theodore held against the expedition sent out in 1867 by the British government for the rescue of their subjects. In April, 1867, this stronghold was taken by Gen. Napier, for which he was created Baron of Magdala. See **ABYSSINIA**.

Magdeburg. A fortified city of Prussia, in the province of Saxony, on the Elbe. It was founded by Otto the Great in the 10th century, and is considered one of the strongest fortresses in Germany. It suffered greatly during the Thirty Years' War, when it was sacked, and its inhabitants massacred, under the direction of Tilly. In 1806 it was taken by the French, and annexed by them to the kingdom of Westphalia; but finally restored to Prussia in consequence of the downfall of Napoleon in 1814.

Magdolum (in the Old Testament *Migdol*). A city of Lower Egypt, near the northeastern frontier, about 12 miles southwest of Pelusium, where Pharaoh Necho defeated the Syrians, according to Herodotus.

Magenta. A town of Italy, in Lombardy, 15 miles west from Milan. A great battle was fought here in June, 1859, between the French and Austrians, in which the latter were defeated. The French were commanded by Gen. MacMahon, who received the title of Duke of Magenta.

Magetobria (now *Moigte de Broie*, on the Saône). A town on the western frontiers of the Sequani, near which the Gauls were defeated by the Germans shortly before Cæsar's arrival in Gaul.

Magistral Line. The tracing or guiding line in fortification,—the first laid down on the work or on paper,—and from which the position of all the other works is determined.

In field fortification the crest line of the parapet is the *magistral*; in permanent fortification the *cordon* or coping of the escarp wall is the guide.

Magna Charta. The great charter, so called, obtained by the English barons from King John in 1215, at Runny Meade. This name is also given to the charter which was granted to the people of England in the ninth year of Henry III., and confirmed by Edward I.

Magnate. A person of rank or dignity; a grandee or nobleman; one of influence or distinction in any sphere.

Magnesia (now *Manissa*). A town of Lydia, usually mentioned with the addition of *ad Syphilum* ("at or near Syphilus") to distinguish it from Magnesia on the Mæander, in Ionia, situated on the northwestern slope of Mount Syphilus. It is chiefly celebrated in history for the victory gained under its walls in 190 B.C. by the two Scipios over Antiochus the Great, whereby that monarch was forever driven from Western Asia. The town after the victory of the Scipios surrendered to the Romans.

Magnetic. Pertaining to the magnet; possessing the properties of the magnet, or corresponding properties; as, a magnetic needle. *Magnetic needle*, a slender bar of steel magnetized and suspended at its centre on a sharp-pointed pivot, so that it may take freely the direction of the magnetic meridian. It constitutes the essential part of a mariner's compass.

Maharajpoo. A small town in Hindostan, India. This place was the key of the position of the Mahratta army on December 29, 1843, when the battle took place between them and the British army under Sir Hugh Gough. The Mahrattas were totally defeated.

Mahe. A seaport in Hindostan, India; is a French settlement on the coast of Malabar, and was taken possession of by them in 1722; retaken by the British in 1761; restored at the peace of Paris in 1763, but was again taken in 1793. It was restored to the French in 1815.

Mahrattas. A people of Hindoo (Hindu) race, inhabiting Central India, south of the Ganges, from Gwalior to Goa, and supposed by many to be the descendants of a Persian or North Indian people. They are first mentioned in history about the middle of the 17th century. Under the leadership of Sevaji, a freebooter or adventurer, they overran and subdued a large portion of the emperor of Delhi's territory. They subsequently were divided into tribes under powerful leaders, and endeavored to overcome the Mogul; but they sustained a frightful defeat in January, 1761, at the hands of Ahmed Shah Abdalli, the ruler of Afghanistan, on the field of Paniput, where they lost 50,000 men, and all their chiefs except Holkar. They still, however, continued to be the hired mercenaries of the Delhi emperor, till the growing influence of the British compelled them to look

to their own safety. After many long and bloody contests with the British and their allies, in which sometimes the whole, but more frequently a portion of the Mahrattas joined, they were one by one, with the exception of Scindiah, reduced to a state of dependence. This last-mentioned chief having raised a powerful army, officered by Frenchmen and disciplined after the European method, continued the contest for a number of years, till his power was finally broken in 1843. The Mahratta chiefs still possess extensive dominions under British protection.

Maida. A town of Naples, in Calabria Ultra, 9 miles south from Nicastra. It is noted for the defeat of the French under Regnier by the British under Sir John Stuart, in an action that took place in the plains near the town in 1806.

Maiden. An instrument resembling the guillotine, formerly used in Scotland for beheading criminals. Also, a fortress which has never been taken.

Maidstone. A town of England, in Kent, 29 miles southeast from London, on the Medway. In 1648 this town was stormed by the Parliamentary troops.

Mail (*Fr. maille, lt. maglia*; from the Lat. *macula*, a "spot, hole, or mesh of a net"). Signifies a metal net-work, and is ordinarily applied to such net-work when used as body defensive armor. Well-made mail formed an admirable defense against all weapons except fire-arms, and its pliability and comparative lightness gave it favor over the more cumbrous plate-armor.

Mail. To put a coat of mail or armor upon; to arm defensively.

Maillet (*Fr.*). A mallet. The French formerly made use of this instrument as an offensive weapon in their engagements. In 1851 the mallet was used at the famous battle "des Trente" (of thirty), which derived its name from the number of combatants that fought on each side. This extraordinary combat holds a distinguished place in the history of Brittany, and was entered into by the partisans of Charles of Blois and the king of France on one side, and by the Count Montfort and the king of England on the other. Under the reign of Charles VI. a Parisian mob forced the arsenal, and took out a large quantity of mallets, with which they armed themselves for the purpose of murdering the custom-house officers. The persons who assembled on this occasion were afterwards called *Mailloins*. In the days of Louis XII. the English archers carried mallets as offensive weapons.

Mailloin (*Fr.*). An old French term which signified an ancient weapon that was used to attack men who wore helmets and cuirasses. A faction in France was also distinguished by this appellation. See **MAILLET**.

Mainade (*Fr.*). A body of marauders commanded by a chief.

Main Body. The line or corps of an

army which marches between the advance and rear-guard; in camp, the body which lies between the two wings.

Main Guard. See **GUARD, MAIN**.

Main Work. In fortification, is the principal work as distinguished from the out-works.

Maine. The largest of the New England States, and the most easterly of the United States. The first settlement was made in it at Phippsburg, in 1607, but was subsequently abandoned. Settlements from New Hampshire gradually extended themselves into it, and it was afterwards annexed to Massachusetts, as far as the Kennebec River. In the latter part of the 17th century it suffered much from the incursions of the savages and the French, many of the towns being laid waste and the inhabitants slaughtered. This state of affairs was terminated by the treaty of Utrecht in 1712. During the Revolutionary war Portland was bombarded by the British in 1775, and much property destroyed. Maine was admitted into the Union as a State in 1820. Its northern boundary formed a subject of controversy with Great Britain, which threatened a war, but was settled by compromise in 1842. During the civil war, Maine was one of the most active of the Northern States in the cause of the Union.

Mainotes. The inhabitants of the mountainous district of Maina, a peninsula between the bays of the Kolokythia and Koron, forming part of the province of Laconia, in Greece. They number about 60,000, and are a wild and brave race, but addicted to robbery. While the Turks held possession of Greece, the Mainotes were almost completely independent, and when not engaged in a common struggle against the Turks their chiefs were at war with each other. The Mainotes, under their principal chief or bey, took a prominent part in the war for the liberation of Greece; but subsequently their independence was destroyed.

Maintain. When any body of men defend a place or post against the attacks of an adverse party, they are said to maintain it.

Maintenance, Cap of. Sometimes called Cap of Dignity, a cap of crimson velvet lined with ermine, with two points turned to the back, originally only worn by dukes, but afterwards assigned to various families of distinction. According to Sir John Fearn, "the wearing of the cap had a beginning from the duke or general of an army, who, having gotten victory, caused the chiefest of the subdued enemies whom he led to follow him in his triumph, bearing his hat or cap after him, in token of subjection and captivity." Most of the reigning dukes of Germany, and various families belonging to the peerage both of England and Scotland, bear their crests on a cap of maintenance.

Maison-du-Roi (*Fr.*). The king's household. Certain select bodies of troops were so called during the monarchy of France,

and consisted of the *gardes-du-corps*, or body-guards, the *gendarmes*, *chevaux-legers*, or light-horse, *mousquetaires*, or musketeers, *la gendarmerie*, *grenadiers à cheval*, or horse-grenadiers, the regiments belonging to the French and Swiss guards, and the *cent Suisses*, or hundred Swiss guards. The *maison-du-roi*, or king's household, was not considered a separate establishment from the rest of the army until the reign of Louis IV. This establishment was successively formed by different kings out of militia companies, which they took into their body-guard.

Maitre d'Armes (Fr.). A term in general use among the French, signifying a fencing-master. Every regiment has a *maitre d'armes* attached to it.

Majesty. A title applied to sovereigns; as, Her Britannic Majesty.

Major. An officer next in rank above a captain and below a lieutenant-colonel; the lowest field-officer.

Major, Aid- (Fr.). See **AID-MAJOR**.

Major, Brigade-. See **BRIGADE-MAJOR**.

Major, Drum-. See **DRUM-MAJOR**.

Major, Etat- (Fr.). See **ÉTAT-MAJOR**.

Major, Farrier-. See **FARRIER-MAJOR**.

Major, Fife-. See **FIFE-MAJOR**.

Major, Sergeant-. See **SERGEANT-MAJOR**.

Major, Town-. See **TOWN-MAJOR**.

Major, Trumpet-. See **TRUMPET-MAJOR**.

Majorate. The office or rank of major.

Majorca. The principal of the Balearic Isles, in the Mediterranean, lying about 120 miles to the east of Spain. Majorca rebelled against Philip V. of Spain in 1714; but submitted July 14, 1715.

Major-General. See **GENERAL, MAJOR-**, and **GENERAL OFFICER**.

Majority. High rank; specifically, the military rank of a major.

Make Good. A phrase used sometimes in the wording of sentences in proceedings of courts-martial in the case of deserters; as, he will make good the time lost by desertion.

Make Ready. See **READY**.

Malabar. An extensive province of Hindostan, in the presidency of Madras. It is supposed that Malabar was, at a very early period, conquered by a king from above the Ghauts. It was invaded by Hyder Ali in 1760, and subdued by him in 1761. On the downfall of Tippoo Sahib, this country was annexed to the British dominions.

Malabar Guns. Heavy pieces of ordnance, which were made in the Malabar country, and were formed by means of iron bars joined together with hoops. They were very long, and extremely unwieldy.

Malacca. A British settlement situated on the west coast of the Malay Peninsula, about 100 miles northwest from the settlement of Singapore. This district was annexed to the Portuguese dominions about 1511, taken by the Dutch in 1640, and given by the Dutch to the English in 1825.

Malacca. The capital of the above country, is situated on the coast, upon the strait which bears its name. In 1507 this town

was visited by the Portuguese, and afterwards stormed by them. It was subsequently taken by the Dutch, who retained possession of it till 1795, when it was occupied by a British force.

Malaga. A city of Spain, in Granada, on the coast of the Mediterranean, 66 miles northeast from Gibraltar. It fell into the hands of the Moors in 714, and was not wrested from them until 1487, when it was taken by Ferdinand the Catholic. In 1810 it was occupied by the French, and remained in their possession till 1812.

Malakoff. A hill near Sebastopol, on which was situated an old tower strongly fortified by the Russians during the siege of 1854-55. The allied French and English attacked it on June 17-18, 1855, and after a conflict of forty-eight hours were repulsed with severe loss. On September 8, the French again attacked the Malakoff; at 8 o'clock the first mine was sprung, and at noon the French flag floated over the conquered redoubt. In the Malakoff and Redan were found 3000 pieces of cannon of every caliber, and 120,000 pounds of gunpowder.

Malandrins, or Tard-venus (Fr.). Companies of banditti, who chose their own chief, and overran France and Italy in the 14th century.

Malatesta. A noble Italian family, which acquired the lordship of Rimini in the 13th century, and furnished several leaders of the Guelph party. Malatesta II. and Galeotto Malatesta, sons of Pandolfo I., began to reign over Rimini in 1355. They had a great military reputation, and next to the Visconti were perhaps the most powerful princes of Italy. The former died in 1384, and Galeotto in 1385, leaving two sons, Carlo and Pandolfo III. These two became able generals, and commanded the army of Visconti, duke of Milan, from 1393 to 1408. Carlo, who was lord of Rimini, died without issue in 1429. The descendants of Pandolfo III. possessed Rimini until 1528, when it was added to the papal dominions.

Malavilly. A town of Hindostan, in the province of Mysore, where the English troops under Gen. Harris defeated Tippoo Sahib's army in 1799.

Maldon. A town of England, in the county of Essex, which was built in 28 B.C. It is supposed to have been the first Roman colony in Britain; was burnt by Queen Boadicea, and rebuilt by the Romans. It was burnt by the Danes in 991, and rebuilt by the Saxons.

Malignant. In English history, one of the adherents of the house of Stuart; a cavalier; so called by the opposite party.

Malingering. To feign illness, or to protract disease in order to avoid duty.

Malingeringer. A soldier who feigns himself sick. Any soldier convicted of malingering, feigning or producing disease, or of intentionally protracting his cure or aggravating his disease, is liable to be tried by a court-martial for "conduct prejudicial to

good order and military discipline," and to suffer the punishment attached to that offense.

Malingery. A feigning of illness, or protracting of disease in order to escape duty.

Malkin. A sponge with a jointed staff for cannon.

Malleable Iron. Iron which can be worked under the hammer. The term is specifically applied to cast iron which has had a part of its carbon extracted by cementation with an oxide.

Mallet. A wooden hammer, to drive into the ground the pegs by which a tent is fastened; it is likewise used on various other occasions, especially in fortification and artillery.

Malmesbury. A town of England, in Wiltshire. This town was taken from the royalists by Sir William Walter in 1648, but it was soon recovered, and again taken a short time after.

Malo, St. A seaport of France, in the department of Ille-et-Vilaine, on the small island of Aron. This port sustained a tremendous bombardment by the English under Admiral Benbow in 1693, and under Lord Berkely in July, 1695. In 1758 the British landed in considerable force in Canceille Bay, and went up to the harbor, where they burnt upwards of a hundred ships, and did great damage to the town, making a number of prisoners.

Maloi-Jaroslavitz. A town of Russia, in the government of Kaluga. It is noted for being the scene of a most sanguinary action between the French and Russians, in October, 1812, in which the former were defeated.

Malplaquet. A village of France, in the department of the North. It was the scene of a sanguinary battle in 1709, between the French under Marshal Villars, and the allies commanded by the Duke of Marlborough and the Prince Eugène, in which the latter were victorious.

Malta. An island belonging to Great Britain, situated in the Mediterranean, 54 miles from the Sicilian coast, and about 200 from Cape Bon, on the African coast. It is strongly fortified around the capital, Valetta, which was built by the Knights of St. John. Malta was colonized by the Carthaginians about 500 B.C., and as early as the first Punic war it was plundered by the Romans, but did not come finally into their possession until 242 B.C. During the 5th century it fell successively under the sway of the Vandals and Goths. The Romans, however, regained it under Belisarius in 533 A.D., and kept possession of it till it was conquered by the Arabs in 870. In 1090, Count Roger of Sicily drove out the Arabs, and established a popular council for the government of the island. Charles of Anjou, after overrunning Sicily, made himself master of it; but after a time, the houses of Aragon and Castile successively held the island. Subsequently, the emperor Charles V. took possession of Malta, and in 1680 granted it to the

Knights of St. John of Jerusalem, from whom the Turks had recently captured their great stronghold at Rhodes. The knights raised by degrees the stupendous fortifications, and, moreover, spent their large income in beautifying the island in every way. Meanwhile they rendered incessant services to Christendom in the chastisement of the ferocious Barbary pirates. To revenge these acts, the Turks brought immense forces against Malta in 1657, and again in 1666. The siege in the latter year was carried on by the sultan Solymán himself, with the flower of the Ottoman army; but the grand master, La Valette, opposed a heroic resistance, and he was forced to re-embark, with the loss of more than 25,000 of his best troops. The defenders lost 260 knights and 7000 Maltese soldiers; and their gallantry was the theme of admiration throughout the world. After this siege the knights built Valetta. In 1571, they, with the Maltese, behaved most courageously at the battle of Lepanto, where the Turks lost 80,000 men. Though waging perpetual war with the Turks, the knights continued in possession of Malta until 1798, when it surrendered to Napoleon, and received a French garrison. In 1800 it was blockaded by a British squadron, and was forced to surrender to the English, in whose possession it has remained as a dependency.

Malta, Knights of. See ST. JOHN OF JERUSALEM, KNIGHTS OF.

Maltese Cross. A cross of eight points, of the form worn as a decoration by the Hospitallers and other orders of knighthood.

Malvern Hill. Near the James River, in Virginia. Here, on the night of June 30, 1862, all the divisions of the Army of the Potomac, under Gen. McClellan, were united in a strong position, after five days of incessant marching and fighting. About 4 A.M. on July 1 the Confederate forces advanced to storm this position, but were mowed down by a destructive fire of grape from the land batteries, and were obliged to seek shelter in the woods. The gunboats, also, which were within range, opened a destructive fire of shells on the enemy. The attack was a complete failure, the loss of the Confederates being considerable, while that of the Federals was insignificant. After this repulse, the Confederates retired to Richmond, and McClellan pursued his way to the James, arriving at Harrison's Landing on July 8.

Mameliere (Fr.). Armor for the breast, from which depended two chains, one attached to the pommel, and the other to the scabbard of the sword.

Mamelukes (Arab. *mamluk*, a "slave"). The name given to the slaves of the beys, brought from the Caucasus, and who formed their armed forces. When Genghis Khan desolated a great part of Asia in the 13th century, and carried away a multitude of the inhabitants for slaves, the sultan of Egypt bought 12,000 of them, partly Min-

grelians and Tartars, but mostly Turks, and formed them into a body of troops. But they soon found their own power so great that, in 1254, they made one of their own number sultan of Egypt, founding the dynasty of the Baharites, which gave place to another Mameluke dynasty in 1382. The Caucasian element predominated in the first dynasty, the Tartar element in the second. Selim I., who overthrew the Mameluke kingdom in 1517, was compelled to permit the continuance of the 24 Mameluke beys as governors of the provinces; but in the middle of the 18th century they regained such a preponderance of power in Egypt that the pasha named by the Porte was reduced to a nominal ruler. The number of them scattered throughout all Egypt was between 10,000 and 12,000 men. Their number was kept up chiefly by slaves brought from the Caucasus, from among whom the beys and other officers of state were exclusively chosen. Their last brilliant achievements were on the occasion of the French invasion of Egypt, and during the time immediately following the retirement of the French. At this time Murad Bey stood at their head. But in 1811 they were foully massacred by Mehemet Ali.

Mamertini. Sons of Mamers, or Mars, were Campanian soldiers of Agathocles. They seized Messina, in Sicily, in 281 B.C., and when closely besieged by the Carthaginians and Hiero of Syracuse in 264, they implored the help of the Romans, which led to the first Punic war.

Mammoth Powder. See GUNPOWDER.

Man. To supply with men; to furnish with a sufficient force or complement of men, as for management, service, defense, or the like. Also, to supply with strength for action; to prepare for efficiency; to fortify.

Man, Isle of. An island of Great Britain, in the Irish Sea, nearly equidistant from the coasts of England, Scotland, and Ireland. It was subdued by the king of Northumberland, 621; by Magnus of Norway, 1092; ceded to the Scots, 1266, and taken from them in 1814 by Montacute, afterwards earl of Salisbury; it subsequently fell to the Earl of Derby. The brave Countess of Derby held this island against the troops of the Parliament in 1651, after her husband had been beheaded at Bolton, England, in the same year for his devotion to the royal cause.

Manassas. A town in Prince William Co., Va., which was an important military position during the civil war, and where the Alexandria and Manassas Gap Railways meet, near a creek called Bull Run; it was held by the Confederates in 1861, when they were attacked by the Federal general Irvin McDowell. He began his march from Washington on July 16, and gained some advantage on the 18th at Centreville. On the 21st was fought the first battle of Bull Run. The Federals, who began the fight, had the advantage till about 3 o'clock P.M.,

when the Confederate general Johnston brought up reinforcements, which at first the Federals took for their own troops. After a brief resistance, the latter were seized with sudden panic, and in spite of the utmost efforts of their officers, fled in disgraceful rout, abandoning a large quantity of arms, ammunition, and baggage. The Confederate generals, Johnston and Beauregard, did not think it prudent to pursue the fugitives, who did not halt till they reached Washington. The Federal army is said to have had 481 killed, 1011 wounded, and 1216 missing. The loss of the Confederates was stated to be about 1500. In March, 1862, when the Army of the Potomac under Gen. McClellan marched into Virginia, they found that the Confederates had quietly retreated from the camp at Manassas. On August 30, 1862, this place was the site of another great battle between the Northern and Southern armies. In August, Gen. "Stonewall" Jackson, after compelling the Federal general Pope to retreat, defeated him at Cedar Mountain on the 9th, turned his flank on the 22d, and arriving at Manassas repulsed his attacks on the 29th. On the 30th, Gen. R. E. Lee (who had defeated Gen. McClellan and the invading Northern army before Richmond, June 26 to July 1) joined Jackson with his army, and Pope received reinforcements from Washington. A desperate conflict ensued, which ended in the Confederates gaining a decisive victory, compelling the Federals to a hasty retreat to Centreville, where they were once more routed, September 1. The remains of their army took refuge behind the lines of Washington on September 2. Pope was at once superseded, and McClellan resumed the command to march against the Confederates, who had crossed the Potomac and entered Maryland.

Manch, or Maunch. A charge frequently used in heraldry to represent a sleeve with long pendent ends, of the form worn by ladies in the reign of Henry I.

Manchester. A city of England, in Lancashire, on the Irwell. In the time of the Druids, it was one of their principal stations. It was one of the seats of the Brigantes, who had a castle or stronghold called *Mancenion*; and was, about 79, selected by the Romans as a station, and called *Mancunium*. Called by the Saxons *Manceastre*. Taken from the Britons, 488; captured by Edwin of Northumbria, 620; taken by the Danes, 877; retaken, 928.

Mandans. A tribe of Indians of the Dakota family, who are located with the Arickarees and Gros Ventres on a reservation near Fort Berthold, Dakota. They were hostile to the Sioux, and more friendly to the whites than the neighboring tribes. They number about 250.

Mandarin. A general term applied to Chinese officers of every grade by foreigners. It is derived from the Portuguese *mandar*, "to command"; the Chinese equiv-

alent is *kwan*. There are nine ranks, each distinguished by a different-colored ball or button placed on the apex of the cap, by a peculiar emblazonry on the breast, and a different clasp of the girdle. The military mandarins are selected by the emperor of China to superintend and command the militia of the country.

Mandilion. A soldier's loose coat; an outer garment without sleeves.

Mandrel. In forging, is a rod used to preserve the interior form of hollow-work. Also, the spindle upon which an article is placed in shaping it in a lathe.

Manduria (now *Casal Nova*). A town in Calabria, on the road from Tarentum to Hydruntum, and near a small lake. Here Archidamus III., king of Sparta, was defeated and slain in battle by the Messapians and Lucanians, 338 B.C.

Manège. The art of horsemanship or of training horses. Also, a school for teaching horsemanship, and for training horses; a riding-school.

Mangalore. A seaport town and fortress of Hindostan, on the eastern shore of the Indian Ocean, in the province of Canara. The Portuguese had a factory here, which was destroyed by the Arabians. In 1793 the town was taken by Hyder Ali, then the Mysore general; in 1768 it was captured by a detachment from Bombay; but was shortly afterwards retaken by Hyder. In 1788 Mangalore again surrendered to a force from Bombay; and after the destruction of Gen. Matthews's army, sustained a long siege from Tippoo Sahib, and was gallantly defended by Col. Campbell. Upon the conclusion of peace in 1784, it was restored, and the fortifications were dismantled. In 1799, on the overthrow of Tippoo, it was finally taken possession of by the British.

Mangan (*Fr.*). This word is sometimes written *mangon*, a warlike machine formerly used. The term itself was generally adopted to signify any species of warlike machine. But it more particularly meant the largest and most powerful machine that could be used for warlike purposes; whether it was practiced to throw enormous stones against besieged places, or to cast javelins, etc. It was likewise called *ballista*, from the Greek, *tormentum*, from the Latin, *torquendo*, and sometimes *petraria*, because stones weighing upwards of 360 pounds were thrown from it. This machine answered the double purpose of defending or attacking fortified places, and it was sometimes used at sea.

Mangonel (*Fr. mangonel, mangoneau*). A very strong and powerful cross-bow, from 15 to 20 feet long, for throwing arrows, darts, or stones. The *trebuchet, ribaudequin*, etc., were only a variety of the above.

Manheim, or Mannheim. A town of Germany, in the grand duchy of Baden, at the confluence of the Neckar and the Rhine. It surrendered to the French, under command of Pichegru, September 20, 1795. On October 31, the Austrians under Wurmser

defeated the French near the city. Several battles were fought with various success in the neighborhood during the late wars.

Manifesto, or Manifest. A public declaration, usually of a prince or sovereign, showing his intentions, or proclaiming his opinions and motives in reference to some act done or contemplated by him; as, a manifesto declaring the purpose of a prince to begin war, and explaining his motives.

Maniglions. The two handles on the back of a piece of ordnance.

Manilla, or Manila. A town of the island of Luzon, and the capital of the Spanish settlements in the Philippine Islands. It was taken by the English in 1757; and again in October, 1762, by storm.

Manipularis (*Fr. manipulate*). The chief officer in a part of the Roman infantry called *manipulus*, was so called. This officer was likewise ordinary (*Fr. ordinaire*).

Manipulus. So called from its standard or flag, which was made of cloth, and hung suspended on a staff with a hand. The manipulus was distinguished in this manner from the chief standard of each legion, which was an eagle of massive metal.

Manipulus (*Fr. manipule*). A small body of infantry originally, so called among the Romans during the reign of Romulus. Their ensign was a hand on the end of a staff. The manipulus consisted of 100 men, and in the days of the consuls and first Cæsars, of 200. Three manipuli constituted a Roman cohort. Each manipulus was commanded by two officers called *centurions*, one of whom acted as lieutenant to the other. Every manipulus made two centuries, or *ordines*. This, however, cannot be said to have been the uniform establishment or formation of the manipulus; for according to Varro and Vegetius, it was the smallest body of men employed in the Roman armies, and composed the tenth part of a century. Spartian says, "it consisted of only ten soldiers." Some authorities assert that it takes its name from *manipulus*, "a handful of straw," the latter having been fixed to a long pole to serve as a rallying signal, before the eagles were adopted. This circumstance has given rise to the modern expression, a handful of men, *une poignée de gens*. Vegetius, on the other hand, says it comes from *manus*, which signified a small body or handful of men collected together, and following the same standard; and Modestus as well as Varro state it to have been so called because, when they went into action, they took each other by the hand, or fought all together. A French writer conceives that the manipulus may be considered as one of those parts of a modern battalion which are distributed in different rooms, etc., and which is called *une chambree*, or a company that messes together.

Manly. Having qualities becoming a man; firm; brave; undaunted; noble, etc.

Mannite, Nitro-. A high explosive resembling nitro-glycerine in its properties,

and made in an analogous manner by the action of nitric and sulphuric acids upon mannite, a form of sugar.

Manœuvre, or Maneuver. Management; dexterous movement; specifically, an evolution, movement, or change of position among military or naval bodies. To perform a movement in military or naval tactics; to make an evolution. Also, to change the positions of, as troops or ships.

Manœuvring-wheels. See **ORDNANCE, CARRIAGES FOR, SEA-COAST CARRIAGES.**

Manresa. A town of Spain, in Catalonia, 80 miles northwest from Barcelona. It suffered much in the war of independence; and in March, 1811, it was almost completely burnt to the ground by Marshal Macdonald.

Mans, Le. A city of France, formerly capital of the province of Maine, now of the department of Sarthe. The final struggle between the Vendean troops and the French republicans took place here in 1793, in which the latter were victorious; and in 1871, another battle took place between the Germans and French, in which the former were victorious.

Mansoura, or Mansourah. A town of Lower Egypt, 84 miles southwest from Dalmietta. Here Louis IX. was defeated by the Saracens and taken prisoner, April 6, 1250. Some French troops which occupied the garrison were massacred here in 1798.

Manteau (Fr.). This word, which literally signifies a cloak, is frequently used among the French to express the covering that hussars or light infantry troops carry for the double purpose of shielding their bodies from the inclemencies of the weather in outposts, etc., and for spreading over their heads, by means of poles, when they occasionally halt, and take a position.

Mantelet (Fr.). A large osier buckler which was used in ancient times; it was held upright, under cover of which archers shot their arrows. Also a circular frame upon wheels covered with osier or horse-hair, used for the same purpose.

Mantes. A town of France, in the department of Seine-et-Oise, 80 miles west-northwest of Paris. It was taken and reduced to ashes by William the Conqueror in 1087.

Mantillis. A kind of shield, anciently fixed upon the tops of ships as a cover for archers.

Mantineæ, or Mantinea. Anciently a city of the Morea, 9 miles north from Tripolitza. It is now the modern Greek village of Pal-espoli. It was famous as being the scene of several battles, of which the most important was that fought between the Spartans and the Thebans under Epaminondas (362 B.C.), in which the former were defeated.

Mantle. A long flowing robe, worn in the Middle Ages over the armor, and fastened by a fibula in front, or at the right shoulder. The mantle is an important part of the official insignia of the various orders of knighthood.

Mantlet. A sort of temporary fortification intended to protect the men working guns in embrasures, casemates, or port-holes from the bullets of sharpshooters. The mantlet is usually made to be hoisted up while the gunner takes aim, and then lowered to cover the whole opening except a circular aperture for the muzzle of the cannon. With every increase in the range and precision of small-arms, mantlets become more essential for the safety of gunners. Mantlets are made of thick fir, of solid oak planks, or of iron plates, the last being preferable, as the lightest. At Sebastopol, the Russians effectively blocked their embrasures by thick mantlets of plaited rope suspended freely. A mantlet of planks or iron plates, about 5 feet high, and occasionally mounted on small wheels, is also used to protect sappers working at the end of a sap, although a rolling gabion is preferred for this purpose by many engineers.

Mantling, or Lambrequin. A heraldic ornament depicted as hanging down from the helmet; and behind the escutcheon. It is considered to represent either the countise (an ornamental scarf which passed round the body and over the shoulder) or the military mantle or robe of estate. When intended for the countise, it is cut into irregular strips and curls of the most capricious forms, whose contortions are supposed to indicate that it has been torn into that ragged condition in the field of battle. When the mantling is treated as a robe of estate, the bearings of the shield are sometimes embroidered on it. A mantling adjusted so as to form a background for the shield and its accessories constitutes an *Achievement of Arms*. In British heraldry, the mantling of the sovereign is of gold lined with ermine; that of peers, of crimson velvet lined with ermine. Knights and gentlemen have generally crimson velvet lined with white satin; but sometimes the livery colors are adopted instead, as is generally the practice in continental heraldry.

Mantonet (Fr.). A small piece of wood or iron, which is notched, for the purpose of hanging anything upon it. The pegs in soldiers' rooms are sometimes so called.

Mantua. A fortified city of Northern Italy, 22 miles southwest from Verona. Mantua is both by nature and art one of the strongest places in Europe. It can boast of an antiquity almost equal to that of Rome, and experienced all the vicissitudes of the Middle Ages, and, like other Italian cities, emerged from them into liberty and independence. It surrendered to the French, February 2, 1797, after a siege of eight months; was retaken by the Austrian and Russian army, July 30, 1799, after a short siege. In 1800, after the battle of Marengo, the French again obtained possession of it. It was included in the kingdom of Italy till 1814, when it was restored to the Austrians, who surrendered it to the Italians, October 11, 1866, after the peace.

Manual. Book of reference; as, ordnance manual, etc.

Manual. A prescribed exercise by means of which soldiers are taught to handle and use their weapons. The *manual of arms* is the exercise with the musket; the *manual of the piece*, the exercise with the field-gun. There are also *manuals for the sabre, pistol*, etc.

Manuballiste (Fr.). A cross-bow. There were two kinds in the reign of Henry VII., viz., the *latch* which was used for quarrels, and the *prodd* for bullets.

Manufacture of Ordnance. See ORDNANCE, MANUFACTURE OF.

Manufacture of Powder. See GUNPOWDER.

Manx. Pertaining to the Isle of Man.

Maoris. A New Zealand word signifying *native*, is the name given to themselves by the inhabitants of New Zealand, and that by which they are now usually designated. In 1861 war broke out between them and the British, terminating in favor of the latter in 1862; but in 1863 the Maoris recommenced hostilities, and a formidable conspiracy was formed to expel the British troops. In 1868 they massacred many settlers and offered a desperate resistance, and were not subdued until the following year. They numbered at that time about 40,000. They are now comparatively peaceable.

Map. In a military and geographical sense, is a plane figure, representing the surface of the earth, or a part thereof, according to the law of the particular kind of projection used; distinguishing the situation of cities, mountains, rivers, roads, etc.

Marathon. A village on the east shore of Attica, 20 miles northeast from Athens. Here on September 28 and 29, 490 B.C., the Greeks, only 10,000 strong, defeated the Persian army amounting to 200,000, who had 6400 killed. The Greek loss was 192 Athenians killed, besides some Plataeans and slaves. The Greeks were commanded by Miltiades, Aristides, and Themistocles. Among the slain was Hippias, the instigator of the war. The Persian army was forced to retreat to Asia.

Marathus. An important city on the coast of Phœnicia, opposite to Aradus. It was destroyed by the people of Aradus in the time of the Syrian king, Alexander Balas, a little before 150 B.C.

Maraud. To rove in quest of plunder; to make an excursion for booty; to plunder.

Marauder. A rover in quest of booty or plunder; a plunderer.

Marauding. Is irregular plunder or violence offered to the inhabitants of a country by the individuals of an army. In all armies where discipline is maintained, marauding is, at least professedly, punished by death; the provost-marshal having power to inflict that penalty summarily on all offenders taken in the act. Marauding is also applied to plundering at sea; as, the Barbary corsairs are systematic marauders.

Marburg. A town of Germany, in Hesse-Cassel, situated on the Lahn. It suffered much during the Seven Years' War, 1758-60.

March. The movement of a body of men from one place to another. In marching it cannot be too strongly inculcated that every just movement and manœuvre depends upon the correct equality of march established and practiced by all the troops of the same army, and that when this is not attended to confusion must follow on the junction of several battalions. Also, the distance marched over; as, a march of 20 miles.

March. To cause to move in military array; to push forward, as troops; to cause to advance in a steady, regular, or stately manner.

March. The military signal for soldiers to move; a piece of music, designed or fitted to accompany and guide the movement of troops; or a piece of music composed after the measure of a march. Also, the command for soldiers to move.

March. The length of a day's march for troops of any arm depends, to a great extent, upon the condition of the roads, the supply of water, forage, etc.; also upon the advantages to be gained over an enemy.

Infantry marches at the rate in common time of 90 steps = 70 yards in one minute, or 2 miles 680 yards in an hour; in quick time, 110 steps = 86 yards in one minute, or 2 miles 1613 yards in an hour; in double time, 165 steps = 151½ yards in one minute, or 5 miles 275 yards in an hour. Under ordinary circumstances infantry should march from 15 to 20 miles a day, halting about ten minutes every hour.

Cavalry should march about 20 miles a day, and be kept at a walk, halting several times during the day, when the men should dismount and permit the horses to refresh themselves by giving them a few mouthfuls of grass and water. On a forced march the horses should not be halted, but they should be relieved fifteen minutes every hour by dismounting the men and requiring them to march. For selection of cavalry horses, rate of speed at a trot, gallop, etc., see HORSE.

The march of artillery should be governed by the movements of the arms of the service to which it is assigned for duty. The care of men and horses is a combination of what has been laid down for cavalry and infantry. For the rates of march of, and loads carried by, artillery horses, see PACK AND DRAUGHT HORSES.

Marchands (Fr.). Slop-sellers, petty sutlers. Men of this description always flock round and follow an army on its march. As they generally deal in articles which are required by the officers and soldiers, it is the business of every general to see them properly treated, to insure their safety, and to permit them, under certain regulations, to have access to the camp.

Marcher. One who marches. In ancient times the lord or officer who defended the marches or borders of a territory.

Marches. A frontier, a border. In English history, the boundary between England and Wales, also between England and Scotland.

Marches, Combined. When the movements of the divisions or corps are made independent of each other, but having the same object in common, they are known as combined marches. They are arranged with the intention of having the several columns arrive at a given position but coming from different directions.—*Prof. J. B. Wheeler.*

Marches, Flank. Are marches made parallel or obliquely to the enemy's position. They are used when it is desired to turn the enemy's position or attack him on the flank.—*Prof. J. B. Wheeler.*

Marches, Manœuvre. Marches are sometimes made by which an army gains a position, the possession of which compels the enemy to leave the position he is occupying. If these marches are under the observation of the enemy, they are termed "manœuvres"; but if made out of his sight, they are called *manœuvre marches*.—*Prof. J. B. Wheeler.*

Marches of Concentration. The marches which are made by several bodies of troops, starting from points separated from each other, for the purpose of bringing these troops together at some stated place, are termed *marches of concentration*. Forced marches are much used in concentrating troops, especially before a battle. Many examples are given in military history.

Friant's division of Davoust's corps marched over 80 miles in forty-eight hours in 1805, to join Napoleon in the battle of Austerlitz. Craufurd's brigade marched, so Napier says, 62 miles in twenty-six hours, to join Wellington at Talavera, in 1809. Napoleon marched an army to the relief of Dresden, in 1813, by forced marches of over 80 miles a day for three consecutive days. The marches of the different corps of the Army of the Potomac on the 80th of June and the 1st of July, 1863, by means of which the army was concentrated at Gettysburg, are good examples of *marches of concentration*. The 6th Corps under Gen. Sedgwick made on this occasion a march over 80 miles.—*Prof. J. B. Wheeler.*

Marches, Route. Route marches are used by troops both during war and in peace. They are used in peace to conduct a body of troops from one station or post to another. They are used in war for the purpose of assembling the fractions of an army on its base of operations; of conducting troops through a district or country where there is no enemy, etc.

There are three kinds of *route marches*, according to the manner in which they are made, viz.: *ordinary*, *forced*, and *marches by rail*.

Ordinary route marches are those made along ordinary roads and where the length of the march in any one day is not greater than 20 miles. Twenty miles is a long march, especially if the body of troops is

large, and this distance is taken as the limit for an ordinary march. If the distance marched in any one day is greater than 20 miles, the march is *forced*.

Forced marches are extremely exhausting upon the troops and should not exceed 80 miles per day, although greater distances have been overcome by good troops. The number of forced marches made in succession must be few, only two or three, even for the best of troops. They are used but rarely in time of peace, and then only under pressing circumstances. They are much used in war, when a rapid concentration of troops is to be made; when a strategical combination is to be effected, etc.

Route marches by rail are employed both in peace and war. This kind of march includes all those in which the troops do not actually march, but are transported bodily to their destination. Railroads have become in recent years the great factor in rapid and cheap means of moving troops, and the term "rail" is therefore applied to this method of conducting troops from one place to another.

This method is of especial service when the time given to the troops to reach their destination is short, and the distance is great. It is especially used in the case of assembling armies and forwarding the reserves and recruits to the theatre of war. The late war in the United States, the war in 1859 in Italy, the Franco-Prussian war in 1870, etc., all furnish examples.—*Prof. J. B. Wheeler.*

Marches, Strategical. Marches which made in the theatre of war, near an enemy whose position is not exactly known, having in general for their object the completion of some strategical combination, are designated *strategical marches*. They are used to conduct an army to a position from which an attack can be made on the enemy, or to a position in which the army can remain and receive an attack; in other words, to a position immediately in the presence of the enemy.

Strategical marches are either *ordinary* or *forced* marches, and are used principally to mass troops at some stated point on the theatre of operations before the enemy can make arrangements to prevent it or can prepare counter-movements to weaken or nullify the effect of the movement. Secrecy, celerity, and good order are therefore indispensable requisites for success in marches of this kind.—*Prof. J. B. Wheeler.*

Marches, Tactical. Marches made in the immediate vicinity of the enemy, and so near that they may be observed by him, are called *tactical marches*. Since these marches are made very near the enemy, greater precautions are required to guard against an attack than are necessary in *strategical marches*.

Tactical marches differ from *route* and *strategical* marches in one material particular, and that is in the number and sizes of the wagon-trains accompanying the troops on the march. Both in *route* and *strategical*

marches the troops are cumbered with long and unwieldy wagon-trains carrying the baggage and supplies of the army, whereas in a *tactical* march there are none, or the trains are reduced to a minimum. Since the enemy may attack the moving columns at any minute, everything is sacrificed to the important one of being ready to fight at a minute's notice, and the army carries with it only supplies enough for two or three days, and little or no baggage. Everything not essential for feeding the troops and not necessary for fighting is therefore left behind the army while it is making a *tactical march*.—*Prof. J. B. Wheeler.*

Marchfeld. In Austria, where Ottocar II. of Bohemia was defeated and slain by his rival, the emperor Rodolph of Hapsburg, August 26, 1278.

Marching. One of the first necessities to distinguish a body of disciplined troops from a mere crowd of men is a regular cadenced step, taken by every individual at the same time, and with the same foot. When troops are to march a long distance the *route* step is employed, the men keeping the same distance and their places in the ranks as when marching on drills, parades, reviews, musters, etc., where the cadenced step in common, quick, or double time is employed. In the U. S. service the length of the step in common and quick time is 28 inches, and the cadence is at the rate of 90 steps per minute for common time and 110 for quick time; in double time the length of the step is 33 inches and the cadence at the rate of 165 steps per minute, but it may be increased to 180. In the feudal ages, when infantry fell into disrepute, cadenced marching was unattended to, and seems only to have been thoroughly revived by Marshal Saxe.

Marching Money. The additional pay which officers and soldiers receive for the purpose of covering the expense necessarily incurred when marching from one place to another.

Marching Order. In the British service a soldier is said to be in marching order when he is fully equipped with arms, ammunition, and a portion of his kit, which weighs from 80 to 85 pounds. In *service marching* order, by the addition of provisions and some campaigning necessities, he carries nearly 50 pounds. But *heavy marching order*, which was yet heavier, is now happily abolished. See **HEAVY MARCHING ORDER**, and **LIGHT MARCHING ORDER**.

Marching Orders. The orders issued preparatory to troops marching; and in the British service signifies six days' journey at least.

Marching Regiments. A term given in England to those who had not any permanent quarters, but were liable to be sent not only from one end of Great Britain to another, but to the most distant of her possessions abroad. Although the word *marching* is insensibly confounded with those of *line* and *regulars*, it was originally meant to

convey something more than a mere liability to be ordered upon any service; for by marching the regular troops from one town to another, the inhabitants, who from time immemorial have been jealous of a standing army, lost their antipathy to real soldiers, by the occasional absence of regular troops. At present the English guards, infantry, etc., may be considered more or less as marching regiments. The marines and volunteers have stationary quarters.

Marcomanni. A powerful confederacy of ancient Germans, who were resident, as their name imports, on the borders. They are first mentioned in history by Cæsar, and seem at that time to have dwelt upon the banks of the Rhine. From Tacitus and several others we learn that they soon afterwards moved westward, under their king Maroboduus, drove the Boii out of Bohemia, and settled in that country. After organizing a government, Maroboduus formed a league with the neighboring tribes, for the purpose of defending Germany against the Romans. He was thus enabled to muster 70,000 disciplined soldiers, and to conclude an honorable treaty with the emperor Tiberius in 6 A.D. In 17 he was defeated by the Cherusci, and in two years afterwards he was expelled from his throne by the Goth Catualda, and forced to seek refuge in Italy. The same fate soon afterwards befell his dethroner and successor, and the Marcomanni once more came under the sway of native kings. After this they gradually extended their dominions, until they had reached the Danube, and had provoked the jealousy of the Romans in the time of Domitian. Then began hostilities between the Romans and the Marcomanni, which led to the protracted struggle of the Marcomannic war, during the reign of Marcus Aurelius, but was finally quelled by the peace of Commodus, in 180. Favored, however, by the feeble rule of Commodus, they continued their predatory inroads into the Roman provinces of Noricum and Rætia, and ventured sometimes as far as the defiles of the Alps. In 270, in the reign of Aurelian, they pushed forward into Italy, and penetrated even to Ancona, spreading consternation around them. After this period they disappear gradually, and are mentioned for the last time among the hordes of Attila.

Marcouf, St. Two small islands of France, in the department Manche, and which protect the roadstead off Cape La Hague. They were taken by the British in 1795, but restored to France at the peace of Amiens.

Maréchal (Fr.). Major-general.

Maréchal de Bataille (Fr.). A military rank which once existed in France, but was suppressed before the revolution, or rather confined to the body-guards. An officer belonging to that corps received it as an honorary title. Its original functions, etc., with respect to general service, sunk in the appointments of *maréchal de camp* and major-general. It was first created by Louis XIII.

Maréchal-général des logis de la cavalerie, this appointment took place under Charles IX. in 1594. He had the chief direction of everything which related to the French cavalry. *Maréchal des logis pour les vivres*, a person belonging to the quartermaster-general's department was so called in the old French service.

Maréchal de Camp (*Fr.*). A military rank which existed during the French monarchy. The person invested with it was a general officer, and ranked next to a lieutenant-general. It was his duty to see the army properly disposed of in camp or quarters, to be present at all the movements that were made; to be the first to mount his charger, and the last to quit him. He commanded the left in all attacks. The appointment under this distinction was first created by Henry IV. in 1598.

Maréchal-Général des Camps et Armées du Roi (*Fr.*). A post of high dignity and trust, which during the French monarchy was annexed to the rank of *maréchal de France*. Military writers differ with respect to the privileges, etc., which belonged to this appointment; it is, however, generally acknowledged that the general officer who held it was intrusted with the whole management of a siege, being subordinate only to the constable, or to any other *maréchal de France*, who was his senior in appointment.

Maréchal-Général des Logis de l'Armée (*Fr.*). This appointment, which existed during the old French government, and has since been replaced by the *chef de l'état-major*, corresponds with that of quartermaster-general in the British service.

Maréchaussées de France (*Fr.*). A species of military police which formerly existed in France. During the French monarchy there were 81 companies of *maréchaussées à cheval*, or mounted policemen. These companies first formed for the purpose of preserving public tranquillity, and were distributed in the different provinces of the kingdom. This useful body of men was first formed under Philip I. in 1060; they were afterwards suppressed, and again re-established in 1720, as constituting a part of the gendarmerie of France. There were other companies of *maréchaussées*, who were particularly distinguished from the 81 above mentioned; such, for instance, as that of the constables, called the gendarmerie.

Marengo. A village of Italy, in Piedmont, near the Bormida, 2 miles southeast from Alessandria. Here the French army, commanded by Bonaparte, attacked the Austrians, June 14, 1800; his army was retreating, when the arrival of Gen. Dessaix turned the fortunes of the day. The slaughter on both sides was dreadful. By this victory Bonaparte gained 12 strong fortresses, and became master of Italy.

Margarita. An island in the Caribbean Sea lies off the coast of Venezuela, of which republic it forms a province. This island was first visited by Columbus in 1498, and

has in more recent times (1816) been the scene of a bloody warfare between the revolutionists and the Spanish troops under Gen. Murillo, in which the latter were defeated.

Margrave. A German nobleman corresponding in rank to the English marquis. *Margravine* is the wife of a margrave.

Margum, or **Margus**. A fortified place in Mœsia Superior, west of Viminacium, situated on the river Margus (now *Morava*), at its confluence with the Danube. Here Diocletian gained a decisive victory over Carinus.

Maricopa Indians. A tribe of aborigines, numbering about 400, who are located with the Pimas on a reservation on the Gila River, Arizona, about 180 miles above its mouth. They are peaceable, and follow agricultural pursuits.

Mariembourg. A fortified town of Belgium, situated in the province of Namur. This place was occupied by the French from 1659 till 1815.

Marignano (now *Malegnano*). A village of Northern Italy, near Milan. Three battles have been fought near here: (1) Francis I. of France defeated the Duke of Milan and the Swiss, September 18-14, 1515; above 20,000 men were slain; this conflict has been called the "battle of the giants." (2) Near here was fought the battle of Pavia. (See PAVIA.) (3) After the battle of Magenta, June 4, 1859, the Austrians intrenched themselves at Malegnano. Marshal Bataillon d'Hilliers with 16,000 men was sent to dislodge them, which he did, on June 8, with a loss of about 850 killed and wounded. The Austrians suffered severely.

Marine. A soldier serving on ship-board; a sea-soldier; one of a body of troops trained to do duty on vessels of war.

Marine Fortification. This kind of fortification differs from land fortification in that the approaches of the enemy which are to be resisted take place on the level of the sea, so that he can come near without having to overcome the dangerous slope of the glacis. The combat is simply one between two powerful batteries, and the question to be decided is, whether the ship or the fort will first be placed *hors de combat*; the ship having ordinarily the largest number of guns, while the fort has more solid battlements, and its fewer guns of great caliber can be fired with a steadiness unattainable on so shifting a base as the ocean. Under these circumstances, the less relief a sea-fortress has the better, the less likely is it to be hit from shipping. Its walls are usually built perpendicular, or nearly so. The magazines and quarters for the men are bomb-proof, as also are the casemates, from which the guns are usually fired, although sometimes, as in the martello tower, the gun is worked on top of the structure. Sea fortifications may be of various importance, the simplest being the battery consisting of a mere parapet formed in a cliff or on a hill, and mounted with guns to command the

sea; these are generally built in such concealed situations, that it is hoped the hostile ship will not perceive them until they actually open fire. These are numerous all around the British coast. Next greater in importance is the martello tower (which see). More powerful still are the breach-forts, such as those which on either shore defend the entrance to Portsmouth harbor, England. These are constructed of the most solid masonry, and armed with guns of the heaviest caliber, sweeping the very surface of the sea so as to strike an approaching ship between wind and water. The guns are usually in bomb-proof casemates, and the fort is often defended on the land side, if the coast be level; if, however, higher ground be behind, this would be useless, and then the sea-front alone is defensible. Most terrible of all sea-forts, however, are the completely isolated forts with perpendicular faces and two and three tiers of heavy guns. Such are the tremendous batteries which render Cronstadt almost unapproachable, and by which Spithead and Plymouth Sound, England, are now being fortified. These forts are generally large, with all the requisites for a garrison to maintain itself; against them wooden ships stand no chance, and in the American civil war, Fort Sumter, at Charleston, has shown itself no mean antagonist for iron-sides. In the new forts, as Spithead, etc., iron is to be employed as the facing, in plates of such vast thickness and weight that it is supposed no ship can ever possess any comparable power; and as they are to be armed with guns the smallest of which will probably be 800-pounders, it is expected that they will be able to destroy any fleet that could be sent against them. At the present day, the value of sea fortifications is disputed, as iron-plated vessels may pass them with impunity, unless the artillery in the fort be so heavy as to destroy the armor of the ships. In the long run, however, it is apparent that the fort can command the greater power; for its armor may be of any thickness, while that of the ship must be limited by her floating powers, and on the other hand, the limit to the size of artillery must be sooner reached in a ship than in a solid and stationary fortress.

Marines, Corps of. In the U. S. service is a body of troops who serve at the different naval stations, and on board ships of war. The men are drilled in all respects as infantry, and therefore, when on shore, are ordinary land forces. On board ship, their ordinary functions are as sharpshooters in time of action, and at other times to furnish sentries for guarding the stores, gangways, etc.; and they are useful as exercising a good control over the less rigidly disciplined sailors. They are also instructed as guns' crews, and when not on guard, are subject to the orders of the naval officers in the same manner as the seamen. The corps was first established in the United States in 1775, and was per-

manently organized by act of Congress in 1798. By this act, marines were made liable to do duty at the call of the President in any of the forts or posts of the United States, and were placed on the footing of infantry soldiers, as far as regards pay and allowances. When detached for duty with the army, marines are subject to the Articles of War; at all other times they are subject to the laws and regulations for the government of the navy. The corps numbers about 2000 men commanded by a colonel. The corps has undergone many changes in respect of numbers, equipment, drill, and methods of recruiting since its organization, and was never in a better state of discipline and efficiency than now. No man is enlisted who is unable to read and write, under 5 feet 6 inches high, or over thirty-five years of age. It is organized into battalions for duty on shore, and into "guards," or companies, for service afloat, each having its proper complement of officers, non-commissioned officers, musicians, and privates, and is considered an indispensable auxiliary to the navy. Civilians between twenty and twenty-five years of age are eligible at present to appointment as lieutenants in line of promotion, and are stationed at the headquarters of the corps in Washington for their preliminary instruction. In the British service, besides the infantry, there is a division of marine artillery. In rank, marine officers correspond with army officers of the same grade, according to seniority; they are usually appointed from civil life.

Maritime. Bordering on, or situated near, the ocean; connected with the sea by site, interest, or power.

Mark. That toward which a missile is directed; a thing aimed at; what one seeks to hit or reach.

Mark, St., Knights of. An order of knighthood which formerly existed in the republic of Venice, under the protection of St. Mark the Evangelist.

Mark Time. To mark time is to move each leg alternately in quick or ordinary time, without gaining ground. This is frequently practiced when a front file or column has opened too much, in order to afford the rear an opportunity of getting up; and sometimes to let the head of a column disengage itself, or a body of troops file by, etc.

Marker. The soldier who forms the pivot of a wheeling column, or marks the direction of an alignment. Also, the one who records the number of hits and misses made by soldiers at target practice.

Marks, Inspection. Are certain marks cut on cannon to show the number of the gun, the name of the founder, name of inspector, weight of the piece, etc. Condemned shot are also marked. See **INSPECTION OF PROJECTILES**.

Marksmanship. One who is skillful to hit a mark; one who shoots well.

Marksmanship. The skill of a marksman.

Marlins. Are tarred white skeins or long wreaths or lines of untwisted hemp, dipped in pitch or tar, with which cables and other ropes are wrapped round, to prevent their fretting and rubbing in the blocks or pulleys through which they pass. The same serves in artillery upon ropes used for rigging gins, usually put up in small parcels called skeins.

Maron (Fr.). A piece of brass or copper, about the size of a crown, on which the hours for going the rounds were marked in the old French service. Several of these were put into a small bag, and deposited in the hands of the major of the regiment, out of which they were regularly drawn by the sergeants of companies, for the officers belonging to them. The hours and half hours were engraved on each maron. These pieces were numbered one, two, etc., to correspond with the several periods of the night; so that the officer, for instance, who was to go to the 10 o'clock rounds, had as many marons marked ten as there were posts or guard-houses which he was directed to visit. Thus on reaching the first, after having given the *mot*, or watch-word, to the corporal, he delivers into his hands the maron marked one. These marons being pierced in the middle are successively strung by the different corporals upon a piece of wire, from which they slide into a box called *boîte aux rondes*, or box belonging to the rounds. This box is carried next morning to the major, who keeps the key; and who on opening it can easily ascertain whether the rounds have been regularly gone by counting the different marons, and seeing them successively strung.

Maroons. A name given to runaway negroes in Jamaica. When the island was conquered from the Spaniards a number of their negroes fled to the hills and became very troublesome to the colonists. A war of eight years' duration ensued, when the Maroons capitulated on being permitted to retain their free settlements, about 1780. In 1795 they again took arms, but they were speedily suppressed.

Marquee, or Markce. An outer fly, or roof-cloth of a tent; also, a large field-tent.

Marquis, or Marquess. The degree of nobility which in the peerage of England ranks next to a duke. Marquises were originally commanders on the borders or frontiers of countries, or on the sea-coast, which they were bound to protect. In England, the title of marquis was used in this sense as early as the reign of Henry III., when there were marquises or lords-marchers of the borders of Scotland and Wales; and the foreign equivalent of *markgraf* was common on the continent.

Marrons. In pyrotechny, are small paper shells filled with grained powder and primed with short pieces of quick-match. They form part of the decorations of signal-rockets.

Marùcini. A brave and warlike people

in Italy of the Sabellian race, occupying a narrow slip of country along the right bank of the river Atermus. Along with the Marsi, Peligni, and other Sabellian tribes, they fought against Rome; and, together with them, they submitted to the Romans, 804 B.C., and concluded a peace with the republic.

Marsacii. A people in Gallia Belgica, on one of the islands formed by the Rhine, which first became known to the Romans through the war with Civilis.

Marsaglia. Near Turin, in Italy. A battle took place here on September 24, 1698, in which Catinat defeated Prince Eugène and the Duke of Savoy. This battle and place are memorable for being the first at which bayonets were used at the ends of muskets, and to this the French owed the victory.

Marsala (Arab. *Marsa Alla*, "the port of God"). A maritime town of Sicily, in the province of Trapani, about 19 miles south-southwest of the port of Trapani. Marsala has recently acquired historic interest as the point where Garibaldi, eluding the vigilance of the Neapolitan fleet, landed with his heroic *thousand*, and began the romantic campaign which terminated the kingdom of the two Sicilies so ignominiously.

Marseillaise. The name by which the grand song of the first French revolution is known. The circumstances which led to its composition are as follows. In the beginning of 1792, when a column of volunteers was about to leave Strasburg, the mayor of the city, who gave a banquet on the occasion, asked an officer of artillery, named Rouget de Lisle, to compose a song in their honor. His request was complied with, and the result was the Marseillaise,—both verse and music being the work of one night. De Lisle entitled the piece "*Chant de Guerre de l'Armée du Rhin*." Next day it was sung with that rapturous enthusiasm that only Frenchmen can exhibit, and instead of 600 volunteers, 1000 marched out of Strasburg. Soon from the whole army of the North resounded the thrilling and fiery words, *Aux armes! Aux armes!* Nevertheless, the song was still unknown in Paris, and was first introduced there by Barbaroux, when he summoned the youth of Marseilles to the capital in July, 1792. It was received with transports by the Parisians, who—ignorant of its real authorship—named it "*Hymne des Marseillais*," which name it has borne ever since.

Marseilles (anc. *Massilia*). A city in the south of France, the capital of the department of the Mouths-of-the-Rhone, situated on the Mediterranean Sea. It was founded by the Phœceans about 600 B.C.; was an ally of Rome, 218 B.C.; taken by Julius Cæsar after a long siege, 49 B.C.; by Euric the Visigoth, 470; sacked by the Saracens, 889; united to the crown of France, 1482. Marseilles opposed the revolutionary government, and was reduced August 28, 1798.

Marshal (Fr. *maréchal*). A term which

originally meant a groom or manager of the horse, though eventually the king's marshal became one of the principal officers of state in England. The royal farrier rose in dignity with the increasing importance of the *chevalerie*, till he became conjointly with the constable the judge in the *Curia Martiales*, or courts of chivalry. When the king headed his army in feudal times, the assembled troops were inspected by the constable and marshal, who fixed the spot for the encampment of each noble, and examined the number, arms, and condition of his retainers. With these duties was naturally combined the regulation of all matters connected with armorial bearing standards, and ensigns. The constable's functions were virtually abolished in the time of Henry VIII., and the marshal became thenceforth the sole judge in questions of honor and arms. (See **EARL MARSHAL**.) In France, the highest military officer is called a marshal, a dignity which originated early in the 13th century. There was at first only one *maréchal de France*, and there were but two till the time of James I. Their number afterwards became unlimited. Originally, the marshal was the esquire of the king, and commanded the vanguard in war; in later times, the command became supreme, and the rank of the highest military importance. See **FIELD-MARSHAL**.

Marshal. To dispose in order; to arrange in a suitable manner; as, to marshal troops or an army.

Marshal of Scotland, Earl. An officer who had command of the cavalry under the constable. This office was held by the family of Keith, but forfeited by rebellion in 1715.

Marshal, Provost. See **PROVOST-MARSHAL**.

Marshaler (written also *marshaller*). One who marshals.

Marshaling of Arms. In heraldry, is the combining of different coats of arms in one escutcheon, for the purpose of indicating family alliance or office.

Marsi. A brave people of Southern Italy, who, after several contests, yielded to the Romans about 801 B.C. During the civil wars they and their allies rebelled, having demanded and been refused the rights of Roman citizenship, 91 B.C. After many successes and reverses, they sued for and obtained peace and the rights they required, 87 B.C. The Marsi being *Socii* of the Romans, this was called the Social war.

Marsilly Carriage. A naval gun-carriage having but one set of trucks, one of the transoms resting directly on the deck. It is used in the U. S. navy for mounting the 9-inch Dahlgren in broadside.

Marston Moor. Near the city of York, England. The Scots and Parliamentary army were besieging York, when Prince Rupert, joined by the Marquis of Newcastle, determined to raise the siege. Both sides drew up on Marston Moor, July 2, 1644, and the contest was long undecided. Rupert,

commanding the right wing of the royalists, was opposed by Oliver Cromwell, at the head of troops disciplined by himself. Cromwell was victorious; he drove his opponents off the field, followed the vanquished, returned to a second engagement and a second victory. The prince's artillery was taken and the royalists never recovered the blow.

Marta, or Martha Santa. A town of New Granada, South America, capital of a province of the same name in the department of Magdalena. It was repeatedly sacked by pirates during the 16th and 17th centuries; and in 1672 was completely pillaged by a French and an English vessel. It suffered much from the attacks of the Indians during the revolutionary war, and does not appear to have regained its former importance.

Marteau d'Armes (Fr.). An offensive weapon, so called from its resemblance to a hammer.

Martel-de-fer. A hammer and pick conjoined, used by horse-soldiers in the Middle Ages to break and destroy armor.

Martello Towers. Are round towers for coast defense, about 40 feet high, built most solidly, and situated on the beach. They occur in several places round the coast of Great Britain; but principally opposite to the French coast, along the southern shore of Kent and Sussex, where, for many miles, they are within easy range of each other. They were mostly erected during the French war, as a defense against invasion. Each had walls of 5½ feet thickness and was supposed to be bomb-proof. The base formed the magazine; above were two rooms for the garrison, and over the upper of these the flat roof, with a 4½ feet brick parapet all round. On this roof a heavy swivel-gun was to be placed to command shipping, while howitzers on each side were to form a flanking defense in connection with the neighboring towers. Although the cost of these little forts was very great, they are generally considered to have been a failure. The name is said to be taken from Italian towers built near the sea, during the period when piracy was common in the Mediterranean, for the purpose of keeping watch and giving warning if a pirate-ship was seen approaching. This warning was given by striking on a bell with a hammer (Ital. *martello*), and hence these towers were called *turri da martello*.

Martial. Pertaining to war; suited to war; military, as, martial music; a martial appearance; given to war; warlike; brave, as, a martial nation or people; belonging to war, or to an army and navy; opposed to civil; as, martial law; a court-martial.

Martial Law. An arbitrary law, proceeding directly from the military power, and having no immediate constitutional or legislative sanction. When it is imposed upon any specified district, all the inhabitants, and all their actions, are brought within its dominion. It is founded on para-

mount necessity, extends to matters of civil as well as of criminal jurisdiction, and is proclaimed only in times of war, insurrection, rebellion, or other great emergency. It is so far distinct from military law, which affects only the troops and forces. Martial law may, in fact, be termed a subjection to the Articles of War. In a hostile country it consists in the suspension, by the occupying military authority, of the civil and criminal law, and of the domestic administration and government in the occupied place or territory, and in the substitution of military rule and force for the same, as well as in the dictation of general laws, as far as military necessity requires this suspension, substitution, or dictation, and is simply military authority exercised in accordance with the laws and usages of war. Military oppression is not martial law, it is the abuse of the power which that law confers. As martial law is executed by military force, it is incumbent upon those who administer it to be strictly guided by the principles of justice, honor, and humanity,—virtues adorning a soldier even more than other men, for the very reason that he possesses the power or his arms against the unarmed. Martial law affects chiefly the police and collection of public revenue and taxes, whether imposed by the expelled government or by the invader, and refers mainly to the support and efficiency of the army, its safety, and the safety of its operations.

Martialize. To render warlike; as, to martialize a people.

Martinet (so called from an officer of that name in the French army under Louis XIV.). A strict disciplinarian; one who lays stress on the rigid adherence to the details of discipline, or to forms and fixed methods.

Martinetism. Rigid adherence to discipline.

Martini-Henry Rifle. See **SMALL-ARMS**.

Martinique. An island in the West Indies, the most northern and one of the largest of the Windward group. It was taken from the French by the British in February, 1762; restored to France at the peace of the following year; again taken March 16, 1794; restored at the peace of Amiens in 1802; and was again captured February 23, 1809. It reverted to its French masters in 1815.

Martin's Shell. A hollow spherical projectile lined with loam and filled with molten iron,—used for incendiary purposes.

Martlet. In heraldry, a bird resembling a swallow, with long wings, very short beak and thighs, and no visible legs, borne on the shield as a mark of cadency by the fourth son.

Maryland. One of the thirteen original States of the United States, and one of the Central Atlantic States. Maryland was first settled in 1631, by a party from Virginia, and in 1632 by a colony of Roman Catholic gentry from England, under a grant to the second Lord Baltimore, when it received its present name in honor of the English queen, Henrietta Maria. From 1642 to 1645 the

Virginian and English colonies were at perpetual warfare, and the governor of the English colony, Philip Calvert, was obliged to leave, but in 1646 he returned, the rebellion having ended. Maryland took a prominent part in the two French wars, the Revolution, and the war of 1812-14, when it was twice invaded by the British, who were gallantly repulsed from North Point, near Baltimore, September 18, 1814, although they had gained a temporary triumph a few weeks before at Bladenburg. In the war of 1861-66, its sympathies were with the South, and the first blood of the war was shed in Baltimore, several Massachusetts volunteers having been killed on their way to Washington. The State was the scene of several battles during the civil war, and suffered greatly from the contending armies. Maryland was organized as a State in 1776.

Masada. A fortress on the shore of the Dead Sea, built by Jonathan Maccabæus, and afterwards greatly strengthened by Herod, as a place of refuge for himself. It fell into the hands of the Romans after the capture of Jerusalem, the garrison having devoted themselves to self-destruction.

Mascara. A town of Algeria, 48 miles southeast from Oran. The town was taken and nearly destroyed by the French in 1835, and occupied a second time by Gen. Bugeaud in 1841, since which time a garrison of French troops has been constantly maintained there.

Mascot, or Muscat. A large seaport of Arabia, standing on a peninsula on the northeast coast of the province of Oman. In 1607 it was taken by Albuquerque. For nearly 150 years after, it continued in the possession of the Portuguese. About the year 1648, however, it was retaken by the natives, who have ever since retained it.

Masclad Armor. A kind of armor sometimes worn by the Norman soldiers, composed of small lozenge-shaped plates of metal fastened on a leathern or quilted under-coat.

Mascoutins. A tribe of Indians of Algonkin stock, who formerly inhabited the region of the Upper Lakes. They afterwards moved to the Wisconsin River, and subsequently settled on the Ohio. In 1765 they fought against Col. Croghan on the Wabash River, and attacked Col. Clarke in 1777. Their name is now lost among the numerous petty tribes that reside in Kansas.

Mask. A military expression used in several senses. A *masked battery* is one so constructed with grassy glaciis, etc., as to be hidden from the view of the enemy, until, to his surprise, it suddenly opens fire upon him,—on his flank, perhaps. The fire of a battery is masked when some other work, or body of friendly troops, intervenes in the line of fire, and precludes the use of the guns. A fortress or an army is masked when a superior force of the enemy holds it in check, while some hostile evolution is being carried out.

Mask. A wire cage to protect the face in fencing.

Mask Wall. In permanent fortification, is the scarp wall of casemates.

Mason and Dixon's Line. The line which divides Pennsylvania from Maryland, running on the parallel of $39^{\circ} 48' 28''$. The boundary between the colonial possessions of the lords Baltimore and of the Penn family had been a subject of almost continual dispute from the first settlement of the country. At length, in 1760, the contending parties having agreed upon a compromise, appointed commissioners to settle definitely the limits between the two territories. Surveyors were employed by both sides, but their progress appeared rather slow; the proprietors who resided in England decided to send Charles Mason and Jeremiah Dixon, two distinguished mathematicians and astronomers, to complete the work. They arrived in Philadelphia in November, 1768, and by the autumn of 1767 had carefully surveyed and marked a line of nearly 250 miles, extending for the most part through a dense forest and passing over a number of mountain ridges. This line, dividing as it does the free State of Pennsylvania from Maryland, which was formerly a slave State, has been often referred to, in popular language, as the boundary between freedom and slavery in the United States.

Mass. In *statics*, is the amount of matter contained in a body. In *dynamics*, is that measure of the matter in a body which determines its relation to force. The accepted measure is the weight divided by the force of gravity. See **FORCE OF GRAVITY**.

Mass. A word signifying the concentration of troops; the formation of troops in column at less than half distance. To *mass troops*, is to concentrate them by this arrangement on a certain point. A column is *closed in mass* when the sub-divisions have less than half distance.

Massachusetts. One of the thirteen original States of the American Union, and oldest of the New England States. It was discovered by the Cabots in 1497. In 1614 it was visited by Capt. John Smith. In 1620 the "Mayflower" sailed from Southampton with 102 Puritan settlers, and landed at Plymouth December 22. One half of them died from cold and hardship the first year. In 1637, the colony suffered from Indian massacres; and in King Philip's war (1675) 12 towns and 600 houses were burned. The war of the Revolution of 1776 began in Massachusetts with the battles of Lexington and Bunker Hill. It adopted the Constitution of the United States, 1788.

Massachusetts Indians. A general name given to all the tribes of aborigines inhabiting the country in which the colonies of Plymouth and Massachusetts Bay were founded. The five principal tribes were the Nausets, Pokanokets, or Wampanoags, Massachusetts, Pennacooks, and Nipmucks. They were nearly all exterminated in King Philip's war (1675). At present about 1600 Indians reside in Massachusetts.

Massacre. The killing of human beings by indiscriminate slaughter, murder of numbers with cruelty or atrocity, or contrary to the usages of civilized people; cold-blooded destruction of life; butchery; carnage. The following are among the most remarkable:

Before Christ.—Of all the Carthaginians in Sicily, 897; 2000 Tyrians crucified and 8000 put to the sword for not surrendering Tyre to Alexander, 331; 2000 Capuans, friends of Hannibal, by Gracchus, 211; dreadful slaughter of the Teutones and Ambrones near Aix, by Marius, the Roman general, 200,000 being left dead on the spot, 102; the Romans throughout Asia, women and children not excepted, massacred in one day, by order of Mithridates, king of Pontus, 88; great number of Roman senators massacred by Cinna, Marius, and Sertorius, 87; again, under Sylla and Catiline, his minister of vengeance, 82; at Perusia, Octavianus Cæsar ordered 800 Roman senators and other persons of distinction to be sacrificed to the manes of Julius Cæsar, 40.

After Christ.—At the destruction of Jerusalem 1,100,000 Jews are said to have been put to the sword, 70; the Jews, headed by one André, put to death many Greeks and Romans in and near Cyrene, 115; Cassius, a Roman general under the emperor M. Aurelius, put to death 300,000 of the inhabitants of Seleucia, 165; at Alexandria, many thousands of citizens were massacred by order of Antoninus, 215; the emperor Probus is said to have put to death 400,000 of the barbarian invaders of Gaul, 277; massacre of the Gothic hostages by Valens, 378; of Thessalonica, when 7000 persons invited into the circus were put to the sword by order of Theodosius, 390; of the circus factions at Constantinople, 532; massacre of the Latins at Constantinople by order of Andronicus, 1184; of the Albigenses and Waldenses, commenced at Toulouse, 1208; thousands perished by the sword and gibbet of the French in Sicily, 1282 (see **SICILIAN VESPERS**); at Paris, of the Armagnacs, at the instance of John, duke of Burgundy, 1418; of the Swedish nobility at a feast, by order of Christian II., 1520; of Protestants at Vassy, March 1, 1562; of 70,000 Huguenots, or French Protestants, in France, August 24, 1572 (see **BARTHOLOMEW, ST.**); of the Christians in Croatia by the Turks, when 65,000 were slain, 1592; of the pretender Demetrius and his Polish adherents, May 27, 1606; of the Protestants in the Valteline, Northern Italy, July 19, 1620; of the Protestants at Thorn, put to death under a pretended legal sentence of the chancellor of Poland for being concerned in a tumult occasioned by a Roman Catholic procession, 1724; all the Protestant powers in Europe interceded to have this unjust sentence revoked, but unavailingly; at Batavia, 12,000 Chinese were massacred by the natives, October, 1740, under the pretext of an intended insurrection; at the taking

of Ismail by the Russians, 80,000 old and young were slain, December, 1790; of French royalists (see *SEPTEMBRIZERS*), September 2, 1792; of Poles at Praga, 1794; in St. Domingo, where Dessalines made proclamation for the massacre of all the whites, March 29, 1804, and many thousands perished; insurrection at Madrid, and massacre of the French, May 2, 1808; massacre of the Mamelukes in the citadel of Cairo, March 1, 1811; massacre of Protestants at Nismes, perpetrated by the Catholics, May, 1815; massacre at Scio, April 22, 1822; destruction of the Janissaries at Constantinople, June 14, 1826; above 500 Kabyles suffocated in a cave in Algeria, June 18, 1845 (see *DAHRA*); massacre of Christians at Aleppo, October 16, 1850; of Maronites by Druses in Lebanon, June, 1860; and of Christians at Damascus, July 9-11, 1860. See *DRUSES* and *DAMASCUS*.

In British History.—Of 800 English nobles on Salisbury Plain by Hengist, about 450; of the monks of Bangor, to the number of 1200, by Ethelfrid, king of Bernicia, 607 or 612; of the Danes in the southern counties of England in the night of November 18, 1002, and the 23d, by Ethelred II. At London it was most bloody, the churches being no sanctuary. Among the rest was Gunilda, sister of Swein, king of Denmark, left in hostage for the performance of a treaty but newly concluded. Of the Jews in England; some few pressing into Westminster Hall at Richard I.'s coronation, were put to death by the people, and a false alarm being given that the king had ordered a general massacre of them, the people in many parts of England slew all they met. In York, 500 who had taken shelter in the castle killed themselves rather than fall into the hands of the multitude, 1189. Of the Bristol colonists, at Cullen's Wood, Ireland (see *CULLEN'S WOOD*), 1209; of the English factory at Amboyna, in order to dispossess its members of the Spice Islands, February, 1624; massacre of the Protestants in Ireland, in O'Neill's rebellion, October 28, 1641. Upwards of 80,000 British were killed in the commencement of this rebellion. In the first three or four days of it, 40,000 or 50,000 of the Protestants were destroyed. Before the rebellion was entirely suppressed, 154,000 Protestants were massacred; of the Macdonalds of Glencoe (see *GLENCOE*), February 18, 1692; of 184 men, women, and children, chiefly Protestants, burnt, shot, or pierced to death by pikes, perpetrated by the insurgent Irish, at the barn of Scullabogue, Ireland, in 1798; of Europeans at Meerut, Delhi, etc., by mutineers of the native Indian army, May and June, 1857; of Europeans at Kalangan, on the south coast of Borneo, May 1, 1859; of the Europeans at Morant Bay, Jamaica, by the infuriated negroes, October 11-12, 1865. See *JAMAICA*.

In American History.—Massacre of about 900 French Protestants (soldiers, women, children, the aged and sick) in Florida, by

the Spaniards under Melendez de Aviles, on September 21, 1665; of about 847 English on March 22, 1622, and of 300 English on April 18, 1644, by Indians in Virginia; of about 100 Algonkin Indians, in the neighborhood of Manhattan, by the Dutch, on February 25-26, 1643; of 200 people at La Chine, Isle of Montreal, by Iroquois, August 25, 1689; of a large number of the inhabitants at Haverhill, Mass., by the French under Des Chaillons and Hertel de Rouville, assisted by 100 picked Canadians and a number of Algonkin Indians, August 29, 1708; of the English at Pocotaligo, Carolina, by the Yamassees and their confederates, on April 15, 1715; of a colony of French, in the southwest, near the banks of the Mississippi, by the Natchez Indians, November 28, 1729; of about 80 English soldiers, by Indians, allies of the French, after the capitulation of Fort William Henry, August 19, 1757; of some 800 settlers, chiefly boys and old men, by British soldiers, Seneca Indians, and Tories, in Wyoming Valley, Pa., on June 30, 1778 (see *WYOMING VALLEY*); of a party of emigrants, by Indians in Mountain Meadows, Utah, 1857; of about 1000 settlers in Western Minnesota, by Sioux Indians in 1862; of the garrison of Fort Pillow, Tenn., by the Confederates, April 18, 1864; of part of the garrison of Fort Phil Kearney (near the fort), by Indians, December, 1866; of five companies of the 7th U. S. Cavalry under Gen. Custer, by Sioux Indians, June 25, 1876.

Massacrer. One who massacres.

Massagetæ. An ancient Scythian people (probably the ancestors of the Goths), who invaded Asia about 635. In a conflict with them Cyrus the Great was killed, 529 B.C.

Massa-Lubrenze, or Massa-de-Sorrento. A town of Naples, on the gulf of the same name, 19 miles south of the city of Naples. It was sacked by the Turks in 1558.

Masse (Fr.). A species of stock-purse, which, during the French monarchy, was lodged in the hands of the regimental treasurer or paymaster, for every sergeant, corporal, drummer, and soldier. The amount retained for each sergeant was *vingt deniers* per day, and *dix deniers* for each of the other ranks, according to the establishment, not the effective number of each battalion. Out of these stoppages a settled and regular *masse*, or stock-purse, was made up, and at the end of every month it was paid into the hands of the major or officer intrusted with the interior management of the corps, and was then appropriated to defray the expense of clothing the different regiments, and lodged in the hands of the directors or inspector-general of clothing.

Masse d'Armes (Fr.). A warlike weapon, which was formerly used. It consisted of a long pole with a large iron head.

Masselotte (Fr.). A French term which is used in foundry, signifying that superfluous

metal which remains after a cannon or mortar has been cast, and which is saved or filed off, to give the piece its proper form.

Massie (*Fr.*). A short stick or rod, used by artificers in making cartridges.

Master, Baggage-. An inspector of roads, formerly an appointment in the British service.

Master, Barrack-. See **BARRACK-MASTER**.

Master-General. See **ORDNANCE BOARD**.

Master-General, Barrack-. Formerly an officer with the rank of major-general, in the British service, who was vested with considerable powers. His duties consisted in keeping all barracks in repair, and all supplies of barrack furniture, utensils, and other stores for the troops, were furnished by him, as also a proper quantity of good and sufficient firing, candles, and other stores. He also supplied forage to the cavalry.

Master-General, Scout-. See **SCOUT-MASTER-GENERAL**.

Master-Gunners. In the British service are pensioned sergeants of artillery, who are placed in charge of the stores in small towers or forts; they are divided into three classes, of which those in the first class receive 5 shillings, in the second, 8 shillings and 6 pence, and in the third, 8 shillings per day. They are now borne in the Coast Brigade of Royal Artillery, but the office has much degenerated in importance since it was first created, at least as early as the time of Henry VIII.

Mastery. Victory in war.

Matafunda. An ancient machine of war, which was used for throwing stones, probably by means of a sling.

Matagorda. A small fort and military post in the south of Spain, contiguous to Cadiz. On February 22, 1810, Capt. (afterwards Lieut.-Gen. Sir Archibald) MacLaine was posted here with a force of about 140 men. The French cannonaded the work with field artillery all the next day; but the garrison were immovable. On March 21, the fire of 48 guns and mortars was directed on the little fort for thirty hours; when 64 men out of the 140 having fallen, Gen. Graham sent boats to carry off the survivors, and the fort was surrendered.

Matan. One of the Philippine Islands, lying to the east of Zebu, where Magellan was killed in a skirmish with the natives in 1520.

Matarieh. A village of Lower Egypt, in the province of Ghizeh, which stands on the site of the ancient Heliopolis, 5 miles north-east from Cairo. The Turks were defeated here by the French in 1800.

Match. A preparation invented to retain fire for the service of artillery, mines, fireworks, etc. For different kinds in use and their composition, see **LABORATORY STORES**.

Match. A bringing together of two parties suited to one another, as for a trial of skill or force, a contest, or the like; as, spe-

cifically, a contest to try strength or skill; an emulous struggle.

Matchlock. The lock of a musket containing a match for firing it; hence, a musket fired by means of a match.

Mate-griffon. An ancient machine, the destroyer and terror of the Greeks, which projected both stones and darts.

Matériel. All cannon, small-arms, carriages, implements, ammunition, etc., necessary for war purposes, used in contradistinction to *personnel*. See **PERSONNEL**.

Mathematics. That science, or class of sciences, which treats of the exact relations existing between the quantities or magnitudes, and of the methods by which, in accordance with these relations, quantities sought are deducible from other quantities known or supposed. It is usually divided into *pure*, which considers magnitude or quantity abstractly, without relation to matter; and *mixed*, which treats of magnitude as subsisting in material bodies, and is consequently interwoven with physical considerations; and to this branch may be referred astronomy, geography, hydrography, hydrostatics, mechanics, fortification, gunnery, mining, and engineering. The knowledge of military mathematics is applicable to all the operations of war, where everything consists in proportion, measure, and motion, bringing into play the several important sciences already enumerated, a certain proficiency in most of which is absolutely requisite to the formation of a good and skillful officer.

Matras (*Fr.*). A sort of dart which was anciently used, and which was not sufficiently pointed to occasion anything more than a bruise.

Matron. A woman, generally the wife of some well-behaved and good soldier, who is employed to assist in the hospital, do the washing, etc., and is under the direction of the surgeon, by whom she is originally appointed to the situation.

Matrosses. Were soldiers in the royal regiment of artillery in the British service, who assisted the gunners in loading, firing, and sponging the great guns. The term is now obsolete in the service, and the duty is done by the gunners.

Matter. That with regard to which anything takes place,—the subject of action, complaint, discussion, legal action, or the like. A word used in reference to courts-martial. The specific charges which are brought against a prisoner, and to which the court must strictly confine itself. Also applied to the evidence before a legal tribunal. *New matter* is new evidence not before considered.

Mattiaci. A people in Germany, who dwelt on the eastern bank of the Rhine, between the Main and the Labn, and were a branch of the Chatti. They were subdued by the Romans, who, in the reign of Claudius, had fortresses and silver mines in their country. After the death of Nero they revolted against

the Romans, and took part with the Chatti and other German tribes in the siege of Moguntiacum. From this time they disappear from history; and their country was subsequently inhabited by the Alemanni.

Mattock. A pioneer tool, resembling a pickaxe, but having two broad sharp edges instead of points.

Mattress. A quilted bed; a bed stuffed with hair, moss, or other soft material, and quilted. Mattresses are much used by officers on campaigns.

Mattucashlash. An ancient Scotch weapon sometimes called armpit dagger, which was worn under the armpit, ready to be used on coming to close quarters. This, with a broad sword and shield, completely armed the Highlanders.

Maubenge. A town of France, in the department of Nord, situated on the Sambre, not far from the frontiers of Belgium. The town is well fortified, the defenses being by the famous Vauban. The town traces its origin back to the 7th century, and being situated near the frontier, has been an object of great contention. It has been taken no less than ten times since the 15th century, and finally by the allies in 1815.

Maul. A heavy beater, or hammer, usually shod with iron, used in driving piles, etc.

Mauritania, or Mauretania. The ancient name of the northwestern part of Africa, corresponding in its limits to the present sultanate of Morocco and the western portion of Algeria. It derived its name from its inhabitants, the Mauri (Moors). The country was conquered by the Romans, who founded many colonies in it, and in 49 B.C. Julius Cæsar appointed Bogudes and Bocchoris joint kings of Mauritania. In 429 the Vandal king Genseric, at the invitation of Count Boniface, crossed the Straits of Gades, and Mauritania, with other African provinces, fell into the hands of the barbarian conquerors. Belisarius destroyed the kingdom of the Vandals, and Mauritania again became a Roman province under an Eastern exarch. In 698, when the Arabs made the final conquest of Africa, the Moors adopted the religion, name, and origin of their conquerors, and sunk back into their more congenial state of Mohammedan savages.

Mauritius, or The Isle of France. An island in the Indian Ocean, lying about 500 miles east from Madagascar, and forming a colony of Great Britain. This island was discovered by the Portuguese in 1605, and in 1598 it was taken by the Dutch. In 1810 it came into the possession of the English.

Mausier Gun. Is the army service breech-loading rifle used since 1874 by the German infantry. It was invented in 1871, and derives its name from Mauser, a gunsmith of Würtemberg, who modified and greatly improved it. Its advantages over the needle-gun, the weapon used in the Franco-German war, are numerous. It is lighter, weighing

about two pounds less, and carrying a heavier charge of powder and a lighter ball, is of longer range, being effective at 1800 yards; the manner of loading it is simpler, and it can be fired with greater rapidity.

Maximum Charge. See CHARGE.

Maya. A gorge in the Pyrenees, between Bidassoa and Nivelle, the scene of an action in July, 1818, in which the French were worsted by the English, under Gen. Stewart.

Mayaguez. A town and port of the island of Porto Rico. An adventurer named Ducondray took this town in 1822, and made an attempt to establish an independent republic.

Maynard's Primer. Consisted of a coil of paper tape containing small charges of percussion-powder placed at certain intervals. The coil was placed in a circular cavity on the outside of the lock-plate. The cocking of the piece, by unwinding the coil, brought successive charges over the nipple, when they were exploded by the fall of the hammer.

Maynard's Rifle. One of the first, if not the first rifle in which a metallic cartridge was used. It was described in an official report to the U. S. Chief of Ordnance in 1856. This, as well as the primer mentioned above, was the invention of Dr. E. Maynard. This rifle in improved form is still in the market.

Meal Powder. See GUNPOWDER.

Measure. To compute or ascertain the extent, quantity, dimensions, or capacity of, by a certain rule or standard.

Measure of Velocity. In projectiles and mechanics, is the space passed over by a moving body in any given time. The space therefore must be divided into as many equal parts as the time is conceived to be divided into: the quantity of space answering to such portion of time is the measure of the velocity.

Measures. For powder are cylindrical copper vessels of various sizes for determining the charges of shells, cannon, etc.

Meaux. A town of France, in the department of the Seine-et-Marne, 23 miles northeast from Paris. After a siege of several months, this place was taken by the English in 1520.

Mecca. A city of Arabia, capital of the province of Hejaz, and of the district Belud-el-Haram. This was the birthplace of Mohammed, and the cradle of the Mussulman creed. In 1804 and 1807, it was taken by the Wahabees, and in 1818, by Ibrahim Pasha.

Mechanical Manœuvres. The application of the mechanical powers in mounting, dismounting, shifting, and transporting artillery.

Mechanical Powers. Certain simple machines, such as the lever and its modifications, the wheel and axle, the pulley, the inclined plane with its modifications, the screw, and the wedge, which convert a small force acting through a great space into a great force acting through a small space, or *vice versa*, and are used separately or in combination.

Mechanics. That science, or branch of applied mathematics, which treats of motion, and develops the effects of powers or moving forces, so far as they are applied to machines.

Mechanicsville. In Henrico Co., Va. Near here, on the left bank of the Chickahominy, on the east side of Beaver Dam Creek, a battle was fought on June 26, 1862, between the Confederate forces, under Gen. Lee, and the Federal troops, under Gen. McClellan, in which the former were compelled to retreat with great loss. The fight was mainly sustained on the Federal side by the brigades of Gens. Reynolds and Seymour, and lasted about seven hours, during the greater part of which time the Federal artillery kept up a destructive fire on the enemy as they essayed to charge the lines, each successive attempt only ending in renewed disaster. Their loss was said to be about 3000, while that of the Federals did not exceed 300.

Mechlin, or Malines. A town of Belgium, in the province of Antwerp, situated on the Dyle. It was founded in the 6th century; destroyed by the Normans in 884; sacked by the Spaniards, 1572; taken by the Prince of Orange, 1578, and by the English, 1580; frequently captured in the 17th and 18th centuries, partaking in the evil fortunes of the country.

Mecklenburg. Formerly a principality in Lower Saxony, now independent as the two grand duchies of Mecklenburg-Schwerin and Mecklenburg-Strelitz. The house of Mecklenburg claims to be descended from Genseric the Vandal, who ravaged the Western empire in the 5th century, and died, 477. During the Thirty Years' War, Mecklenburg was conquered by Wallenstein, who became its duke, 1628; it was restored to its own duke, 1680. After several changes, the government was settled in 1701 as it now exists in the two branches of Schwerin and Strelitz. In 1815 the dukes were made grand dukes, and they joined the new North German Confederation by treaty, August 21, 1866.

Medal. Is a piece of metal in the form of a coin, struck to commemorate some remarkable event, or in honor of some distinguished person, but having no place in the currency. Medals belong to two periods, ancient and modern, separated by a wide interval. To the former belong those pieces issued in ancient Rome, known as *medallions*, and made of gold, silver, or copper. They are generally supposed to have been struck on occasions similar to those on which medals are coined in modern times, on the accession of an emperor, on the achievement of an important victory, or as specimens of workmanship. Modern medals date from the 14th century, but few were struck prior to the 15th. In more recent times, it has become customary to confer medals as marks of distinction for eminent worth or noble conduct, but more particularly for naval or military services. Such medals of honor are

seldom of great intrinsic value, their worth depending on the associations connected with them. During the Revolutionary war Congress conferred these marks of honor on several military and naval heroes, who distinguished themselves by their valor or achievements during that eventful period. In the U. S. service, at present, bronze medals of honor are conferred on enlisted men in the army, navy, and marine corps for gallantry in action, or extraordinary heroism in the line of their duties. In the English military service, similar medals are granted. They are generally of silver, and have ribbons attached, with clasps or small bars, each of which bears the name of a particular engagement. Good-service medals of silver are also distributed among meritorious soldiers, sailors, and marines.

Medals of Honor. See **MEDALS**.

Medeah, or Medeyah. A fortified town of Algeria, 40 miles southwest from Algiers. This town was taken by the French in 1820.

Media. In ancient times, the name of the northwestern part of Iran, which was bounded by the Caspian Sea on the north, Persia on the south, Parthia on the east, and Assyria on the west. The Medians were in language, religion, and manners very nearly allied to the Persians. After they had shaken off the yoke of the Assyrians, their tribes united about 708 B.C., chose Deioces for their chief, and made Ecbatana their capital. His son Phraortes, or Arphaxad, subdued the Persians. Cyaxares, the son of Phraortes, in alliance with Nabopolassar, king of Babylon, overthrew the Assyrian empire about 604 B.C., spread the terror of his arms as far as Egypt and the farthest bounds of Asia Minor, and vanquished the brigand hordes of Scythia, who had carried their ravages as far as Syria. He was succeeded by his son Astyages, who was deposed (560 B.C.) by his own grandson Cyrus, king of Persia; and from this time the two nations are spoken of as one people. After the death of Alexander the Great (324 B.C.), the northwest portion of Media became a separate kingdom, and existed till the time of Augustus; the other portion, under the name of *Great Media*, forming a part of the Syrian monarchy. Media was on several occasions separated from Persia. In 152 B.C., Mithridates I. took Great Media from the Syrians, and annexed it to the Parthian empire, and about 86 B.C., it had a king of its own, named Artavasdes, against whom Mark Antony made war. Under the Sassanian dynasty, the whole of Media was united to Persia. It became, during the 14th and 15th centuries, the stronghold of the Turkoman tribes. In early times the Medes were a warlike race, and were distinguished for their skill with the bow. They were also celebrated for their horsemanship, and it was from them that the Persians adopted this and other favorite exercises and acquirements. In subsequent times, they appear to have become effeminated by luxury.

Mediator. Any state or power which interferes to adjust a quarrel between any two or more powers, is called a mediator.

Medical Department. This department of an army, next to the commissariat, is the most important of all the non-combatant sections. The surgical treatment of the wounded in actual fighting, and still more the combat with disease engendered by crowding, unhealthy stations, and the reckless habits of the soldiery, necessitate a large medical staff; for, on an average of the whole army, it is found that the rate of sickness is at least quadruple that for the civil population. In the British army every battalion, when at home or in the temperate zone, has a surgeon and an assistant-surgeon; when in India or the tropics, another assistant-surgeon is added. The medical department is governed by a director-general, who is a member of the War Office, and has charge of the surgical, medical, and sanitary arrangements of the army. In the United States every military post has at least one medical officer and sometimes two, as the nature of the climate or the strength of the command demands, all of whom are under the command of a surgeon-general, who ranks as brigadier-general, and is permanently established at Washington, D. C. He has full control over everything that pertains to the medical department of the army. Officers of the medical department are assistant-surgeons, with the rank of first lieutenants of cavalry the first five years of their service thereafter, till promoted to the grade of surgeon, when they receive the rank, pay, and emoluments of captain.

Medical Director. In the U. S. service, an officer who is placed on duty at the headquarters of a military geographical division or department, and who, under the supervision of the surgeon-general, has control of the medical department within the limits of the command in which he is serving.

Medical School. At Netley, England, an institution is established for the technical education of medical officers for the British and Indian military service. Candidates are examined competitively in the ordinary subjects of professional knowledge; and, passing satisfactorily through that ordeal, are then required to attend for six months at the Military Medical School. As the school is attached to the Royal Victoria Hospital, which is the great invalid depot for the whole army, the students have ample opportunity of seeing theory exemplified in practice.

Medical Staff. This branch of the British army is under the control of an experienced officer, stationed at headquarters, under the denomination of "director-general." Immediately under his command are a number of inspectors-general, deputy inspectors-general, and a corps of staff-surgeons. The locality of all the officers subordinate to the director-general is determined by the force to which they may be attached. All the regimental surgeons and assistant-

surgeons make their reports to and consult the staff-officer who is placed in their district. The director-general is paid from the civil department of the government. A deputy inspector-general of hospitals must have served five years at home, or three years abroad in this rank, before he shall be eligible to the highest rank of inspector-general.

The *medical board* consists of three or four medical officers, who may be convened by an order through the Secretary of War, for the inspection of wounded officers, in order to secure them a provision for life, according to the regulations regarding pensions, etc.

Medicine-chest. Is composed of all sorts of medicines necessary for a campaign, together with such chirological instruments as are useful, fitted up in chests and portable. The army is supplied with these at the expense of the government.

Medina. Or more fully, *Medinat Al Nabi* (City of the Prophet), the holiest city throughout Mohammedanism next to Mecca, and second capital and stronghold of Hedjaz in Western Arabia. In this city Mohammed was protected when he fled from Mecca, September 18, 622, others say July 15, 622. (See *HAGIRA*.) Medina was taken by the Wahabees in 1804; retaken by the pasha of Egypt in 1818.

Medina de Rio Seco. A town of Spain, 25 miles northwest of Valladolid, on the Seguillo, an affluent of the Douro. Here Bessières defeated the Spaniards, July 15, 1808.

Medjidie. A Turkish order, instituted in 1852, and conferred after the Crimean campaign, to a considerable extent, on British officers. It has five classes; and the decoration, which differs in size for the different classes, is a silver sun of seven triple rays, with the device of the crescent and star alternating with the rays. On a circle of red enamel, in the centre of the decoration, is the legend in Turkish, whose signification is "zeal, honor, and loyalty," and the date 1268, the Mohammedan year corresponding to 1852; the sultan's name is inscribed on a gold field within this circle. The first three classes suspend the badge round the neck from a red ribbon having green borders, and the fourth and fifth classes wear it attached to a similar ribbon on the left breast. A star, in design closely resembling the badge, is worn on the left breast by the first class, and on the right breast by the second class.

Meeanee, or Miyani. A village in Sindh, Hindostan, on the Indus, 6 miles north of Hyderabad, is celebrated as the scene of a great battle between Sir Charles Napier and the ameers of Sindh, February 17, 1848. Sir Charles's force, composed partly of Europeans, and partly of natives, amounted to only 2800 men; that of his foes to 22,000, yet the latter were totally routed, losing in killed and wounded 5000, while Sir Charles's loss was only 256. The result of this victory was the conquest and annexation of Sindh.

Meer Bukshy. In the East Indies, a chief paymaster.

Meer Tozuk. In the East Indies, a marshal whose business is to preserve order in a procession or line of march, and to report absentees.

Meerut, Merut, or Mirut. The chief town of a district of the same name in British India, on the Kali Nuddi, about 42 miles northeast from Delhi. Here on May 10, 1857, the native troops revolted, shooting their own European officers, and massacring the European inmates without respect to age or sex.

Megalopolis (now *Sinano*, or *Sinanu*). The most recent, but the most important of the cities of Arcadia, was founded on the advice of Epaminondas, after the battle of Leuctra, 371 B.C., and was formed out of the inhabitants of 38 villages. It was situated near the frontiers of Messenia, on the river Helisson. It was for a time subject to the Macedonians, but soon after the death of Alexander the Great, it was governed by a series of native tyrants, the last of whom united the city to the Achæan League, 234 B.C. It became, in consequence, opposed to Sparta, and was taken by Cleomenes, who destroyed a great part of the city, 222. After the battle of Sellasia in the following year it was restored by Philipæmen.

Megara. An ancient city of Greece, capital of the territory Megaris, was situated 8 stadia (1 mile) from the sea, opposite the island of Salamis, about 26 miles from Athens and 81 miles from Corinth. In 461-445 B.C. the Athenians had possession of the country, but it subsequently became annexed to Attica, and Megaris formed one of the four ancient divisions of Attica. It was next conquered by the Dorians, and was for a time subject to Corinth; but it finally asserted its independence, and rapidly became a wealthy and powerful city. The government was originally an aristocracy, as in most of the Doric cities; but Theagenes, one of the common people, put himself at the head of the popular party, and obtained the supreme power about 620 B.C. Theagenes was afterward expelled, and a democratical form of government established. After the Persian wars, Megara was for some time at war with Corinth, and was thus led to form an alliance with Athens, and to receive an Athenian garrison in the city, 461; but they were expelled in 441. The city was taken and its walls destroyed by Demetrius Poliorcetes; it was again taken by the Romans under Q. Metellus; and in the time of Augustus it had ceased to be a place of importance.

Meggheteriarque (*Fr.*). The commanding officer of a body of men; who formerly did duty at Constantinople, and were called *Heteriennes*, being composed of soldiers who were enlisted in the allied nations.

Mehadpore, Mehidpoor, Mahedpore, or Maheidpoor. A town of Hindostan, Gwalior dominions, 22 miles north of Odjein. Here Sir Thomas Hislop and Sir John Malcolm defeated the Mahrattas under Holkar, December 21, 1817.

Meigs Gun. See MAGAZINE GUNS.

Melanippus. The name of four Trojan warriors, who fought valiantly in the wars of their native country.

Melazzo (West Sicily). Here Garibaldi, on July 20-21, 1860, defeated the Neapolitans under Gen. Bosco, who lost about 600 men; Garibaldi's loss being 167. The latter entered Messina; and on July 30 a convention was signed by which it was settled that the Neapolitan troops were to quit Sicily. They held the citadel of Messina till March 18, 1861.

Mêlée (*Fr.*). A military term, which is used among the French to express the hurry and confusion of a battle. *Mêlée* corresponds with the English expression "thick of the fight."

Melegnano. See MARIIGNANO.

Melfi. A town of Naples, province of Basilicata (Potenza), 75 miles east-northeast of Naples, and 84 south of Foggia. It was formerly the capital of the Norman possessions in Southern Italy, and was defended by walls, now in a ruinous condition, and by an ancient Norman castle. The town was taken, and 18,000 of its inhabitants massacred by the French, under Lautrec de Foix, in 1528.

Meloria, or Melora. A small island in the Mediterranean, off the coast of Tuscany, 4 miles west of Leghorn. Near Meloria the Pisan fleet defeated the Genoese in 1241, capturing many bishops going with much treasure to a council. The total destruction of the Pisan fleet on August 6, 1284, by the Genoese near the same place, after a most sanguinary conflict, was considered to be the just punishment of impiety.

Melos (now *Milo*). One of the Cyclades in the Ægean Sea, colonized by the Spartans about 1116 B.C.; it was captured during the Peloponnesian war, after a seven months' siege, by the Athenians, who massacred all the men and sold the women and children as slaves, 416 B.C.

Melrose. A village at the foot of the Eildon Hills, on the south bank of the Tweed. It is famous for the ruins of its noble abbey founded by King David I. in 1136, its original pile having been destroyed during the Wars of the Succession. Melrose was burned by Kenneth, king of Scots, in 839.

Melton-Mowbray. A town of England, in Leicestershire, situated at the confluence of the Wreak and Eye. It is remarkable as the scene of a defeat of the Parliamentary troops by the royalists in 1644.

Melun. An ancient town of France, capital of the department of Seine-et-Marne, 28 miles southeast from Paris. It was the *Melodunum* of the Romans; was taken by Clovis in 494; was stormed five times during the 9th century by the Northmen, and fell into the hands of the English after a siege of six months in 1419, and was held by them for ten years.

Members. Officers are so called who are

detailed by orders to sit on general or garrison courts-martial.

Members, Supernumerary. In case supernumerary members are detailed for a court-martial, they are sworn, and it is right that they should sit and be present at all deliberations even when the court is cleared, in order to be prepared to take the place of any absent member. Until then they have no voice.

Memel. A town and seaport of East Prussia, on the small river Dange, adjacent to the Cürische Haff, 74 miles northeast from Königsberg. It is strongly fortified. It was taken by Teutonic knights about 1828.

Memmingen. A town of Bavaria, circle of Swabia, situated on a tributary of the Iller. It is noted as the scene of a victory gained by the French under Moreau over the Austrians, May 10, 1800.

Memoir. Is the title given by military officers to those plans which they offer to their government or commanders on subjects relating to war or military economy.

Memoirs. In military literature, a species of history, written by persons who had some share in the transactions they relate, answering in some measure to what the Romans call *commentarii*, "commentaries." Hence Caesar's Commentaries, or the memoirs of his campaigns.

Memorial. An address to the government on any matter of public service.

Memphis. A celebrated Egyptian city, situated in the Delta, or Lower Egypt. During the attempts of the native rulers to throw off the Persian rule, Memphis was an important strategic point. Ochus inflicted severe injury on this town, having plundered the temples and thrown down the walls after he had driven out Nectanebus. Ptolemy VIII. destroyed the city. It fell with the rest of Egypt under the Roman rule, and afterwards was conquered by Amru Ben Abas (689-40).

Memphis. A flourishing city and port of entry of Shelby Co., Tenn. During the civil war, it fell into the hands of the Union forces, after a short naval fight, June 6, 1862, and in 1864, Gen. Forrest made a raid upon it, capturing a great number of prisoners.

Men, Battalion. All the soldiers belonging to the different companies of an infantry regiment were so called, except those of the two flank companies.

Men, Camp-color. Soldiers under the immediate command and direction of the quartermaster of a regiment. Their business is to assist in marking out the lines of an encampment, etc.; to carry the camp colors to the field on days of exercise, and fix them occasionally for the purpose of enabling the troops to take up correct points in marching, etc. So that in this respect they frequently, indeed almost always, act as guides, or what the French call *jaleonneurs*. They are likewise employed in the trenches, and in all fatigue duties.

Menace. A hostile threat. Menacing words used in the presence of a court-martial are punishable in accordance with Article of War 86. See APPENDIX.

Menai Strait (between the Welsh coast and the isle of Anglesey). Suetonius Paulinus, when he invaded Anglesey, transported his troops across this strait in flat-bottomed boats, while the cavalry swam over on horseback, and attacked the Druids in their last retreat. Their horrid practice of sacrificing their captives, and the opposition he met with so incensed the Roman general, that he gave the Britons no quarter, throwing all that escaped from that battle into fires which they had prepared for the destruction of himself and his army in 61.

Menapii. A powerful people in the north of Gallia Belgica, who originally dwelt on both banks of the Rhine, but were afterwards driven out of their possessions on the right bank by the Usipetes and Tenchteri, and inhabited only the left bank near its mouth, and west of the Mosæ.

Mendavia. A town of Spain, province of Navarre, 87 miles southwest from Pamplona. Cæsar Borgia, the infamous son of Pope Alexander VI., was killed here in a skirmish in 1507.

Mende. A town of France, capital of an arrondissement of the same name, on the left bank of the Lot. This town was fortified in 1151; it suffered much in the civil wars of the Reformation, and was taken no less than seven times.

Menehould, St. A town of France, in the department of the Marne, situated on the Aisne, 26 miles northeast of Chalons; it was taken by Louis XIV. in 1658.

Menin. A fortified town of Belgium, province of West Flanders, on the Lys, 31 miles southwest of Ghent. It has undergone a great number of sieges, and in the 17th and 18th centuries was frequently taken by the French.

Menomonees. A tribe of Indians, of Algonkin stock. They number about 1500, are partially civilized, and reside on a reservation near Green Bay, Wis.

Men's-harness. See IMPLEMENTS.

Mensuration. That branch of applied geometry which gives rules for finding the length of lines, the areas of surfaces, or the volumes of solids, from certain simple data of lines and angles. Every military officer should be acquainted with mensuration.

Mentana. A small village, 13 miles from Rome. Here Garibaldi and his volunteers, numbering between 4000 and 4000, after having intrenched his positions at Monterotondo and Mentana on their march towards Tivoli, on November 3, 1867, were totally defeated by the papal and French troops, under Gens. Kanzler and Polhès, after a severe conflict, in which Gen. Faily said "the Chassepot rifles did wonders." There were about 5000 men on each side, but the Garibaldians were very badly armed. The loss of the papal and French troops was

about 200 killed and wounded; that of Garibaldi about 800. Garibaldi crossed the Italian frontier, and was arrested at Correse, and eventually sent to Caprera.

Mentonniere (*Fr.*). Chin-piece; chin-strap; chin-piece of a helmet is so called.

Mentz (*Ger. Mainz, Fr. Mayence*, anc. *Moguntiacum*). A city of Germany, in the grand duchy of Hesse-Darmstadt, on the left bank of the Rhine. Mentz was founded by the Romans in the 2d century, and in 406 was destroyed by the Vandals; but after lying in ruins for some centuries it was restored by Charlemagne, and attained great prosperity after the time of Bonifacius. In the Thirty Years' War, it was taken by the Swedes, and in 1688 by the French, but was restored at the subsequent peace. At the end of 1792, it surrendered to the French. Next year it was taken by the Austrians. By the peace of Lunéville, concluded in 1801, it was formally ceded to France, and in 1815 it was assigned to Hesse-Darmstadt. The town is strongly fortified, and is one of the strongest places in Europe, serving as a defense for Germany on the side of France. On the other side of the Rhine stands the suburb of Castel, which is also fortified.

Mequinenza. A town and port of Spain, on the Ebro, in the province of Huesca, Aragon, 64 miles southeast from Huesca. It is defended by a fortress, which was taken by the French in 1810.

Mercara. A town and fortress in the south of India. It was built by Hyder Ali in 1778, after he had conquered the country. Tippoo Sahib gave it up to the rajah of Coorg in 1792. It was taken possession of by the British in 1884.

Mercenaries. Soldiers serving for pay in a foreign service.

Mercia. One of the largest of the seven kingdoms of the Heptarchy (which see). It comprised the counties from the Thames to Yorkshire, and is said to have been founded by Crida in 585. Three-quarters of a century later, Mercia was conquered for a time by Northumbria; but it recovered its independence, which it retained until Egbert subdued it, when it was included in the kingdom of Wessex.

Merida. A town of Spain, province of Estremadura, on the Guadiana, 35 miles east from Badajoz. It was built by the Romans; taken by the Moors in 718; taken from them in 1229; taken by the French, January, 1811. Near this town, at Arroyas Molinos, the British army under Gen. (afterwards Lord) Hill defeated the French under Gen. Girard, after a severe engagement, October 28, 1811. The British took Merida from the French in 1812, Gen. Hill leading the combined forces of English and Spanish troops.

Merionethshire. The most southern county of North Wales, situated at the middle of the Welsh coast. Here Owen Gwynedd defeated Henry II., and brave Glyndwr rose in arms at the call of friend-

ship and patriotism to resist the usurper of the throne of gentle Henry, and the enslaver of his loved Wales. Tradition and records tell of bloody deeds done here in those and later days by freebooters, daring and cruel.

Merit. To earn by active service, or by any valuable performance; to have a right to claim as reward; to deserve. Also, the quality or relation of deserving well or ill.

Merit, Certificate of. In the U. S. army a certificate which is given by the President, upon the recommendation of commanding officers, to enlisted men who have distinguished themselves in the service. The holder of each certificate is entitled to \$2 per month.

Merit, Order of. A military distinction given to officers or soldiers for some signal service, the badge of which is generally expressive of the service. Such was the medal, or order of merit, presented by the Austrian emperor to the officers of the 15th British Light Dragoons for their bravery in the affair of Villers en Couché in 1794.

Meritorious. Possessing merit or desert; deserving of reward or honor.

Merkin. A mop to clean a cannon. See **MALKIN**.

Merlin. A handspike.

Merlon. The mass of earth of the parapet between two embrasures, generally from 15 to 18 feet in length. Also, the projection on the top of a crenellated wall.

Merovingians. The first Frankish dynasty in Gaul. The name is derived from Merwig, or Merowæus, who ruled about the middle of the 5th century, having united a few tribes under his sway. His grandson, Clovis, or Clodwig, greatly extended his dominions, and on his death divided his kingdom among his four sons, one of whom, Chlotar, or Chlotaire I., reunited them under his own sway in 558. On his death, in 561, the kingdom was again divided into four parts,—Aquitaine, Burgundy, Neustria, and Austrasia. His grandson, Clotaire II., again united them in 613; but after his death, in 628, two kingdoms, Neustria and Austrasia, were formed, in both of which the Merovingian kings retained a merely nominal power, the real power having passed into the hands of the mayors of the palace. The dynasty of the Merovingians terminated with the deposition of Childeric IV., in 752, and gave place to that of the Carolingians.

Merseburg. A town of Prussian Saxony, capital of a circle of the same name, on the Saale. It was near this town that the emperor Henry the Fowler gained his famous victory over the Hungarians in 934. Rudolf of Swabia was here defeated and slain by Henry IV. in 1080.

Mesolonghi. See **MISSOLOGHI**.

Mess. The law is silent with regard to messes in the army. Executive regulations have been made on the subject, but without law it is impossible to put messes on a proper

footing. In England, an allowance is granted by the sovereign in aid of the expense of officers' messes; and every officer on appointment to a corps subscribes one month's pay to the mess-fund. All the officers of the corps mess together. (See GUARD MESS.) In France, the several grades mess separately; lieutenants and sub-lieutenants forming two tables, captains another, and field-officers of different grades generally eating separately also. Generals and colonels of the French service receive an allowance for table expenses, not sufficient to keep open house, but enough to enable them to entertain guests. In the British navy there are generally three messes, namely, the ward-room mess, the gun-room mess, and the engineers' mess; in the U. S. navy there are two: the ward-room and steerage messes. Enlisted soldiers and seamen, in the army and navy respectively, mess together in tables comprising a certain number, according to squads or rating; but this has no reference to the technical meaning of messing as applied to officers, and is merely for the purpose of economy of fuel and labor in the cooking of their rations.

Message. Word sent; more especially a dispatch signaled or telegraphed.

Messenia. A district in the southwest of the Peloponnesus. At an early period after the Doric conquest, it rose to power and opulence. It is chiefly noted for its two wars with Sparta, known as the Messenian Wars, the first of which lasted from 743 to 724 B.C., and the second from 685 to 668 B.C. In both instances the Athenians were defeated, and in consequence, a great part of them emigrated to Sicily, where they took possession of Zancle, which then received the name of Messina, the present Messina (which see).

Messina. A city in the northeast of the island of Sicily, situated on a strait called the Faro di Messina, which separates Italy from Calabria. It is 9 miles northwest from Reggio, in Calabria. The town is entirely surrounded with walls and protected by detached forts and a citadel, which stands on the neck of the curved promontory that forms the harbor. It was seized by the Mamertini about 281 B.C. It belonged for many ages to the Roman empire; was taken by the Saracens about 829. Roger the Norman took it from them by surprise about 1072. It revolted against Charles of Anjou, and was succeeded by Peter of Aragon, 1282; revolted in favor of Louis XIV. of France, 1676; the Spaniards punished it severely, 1678; headquarters of British forces in Sicily prior to 1814; an insurrection took place here which was subdued September 7, 1848. Garibaldi entered Messina after his victory at Malazzo, July 20-21, 1860; the citadel surrendered to Cialdini, March 18, 1861.

Mestre de Camp Général (Fr.). The next officer in rank, in the old French cavalry service, to the colonel-general. This appointment was created under Henry II. in 1552. *Mestre de camp général des dra-*

goons, an appointment which first took place under Louis XIV. in 1684.

Metal. Broken stone, etc., used as a road cover.

Metal. In heraldry, the metals in use are gold and silver, known as *or* and *argent*. The field of the escutcheon and the charges which it bears may be of metal as well as of color. It is a rule of blazon that metal should not be placed on metal, or color on color.

Metals for Cannon. See ORDNANCE, METALS FOR.

Metapontum, or Metapontium. A city of Magna Græcia; was situated on the Tarentine Gulf, 14 miles from Heraclea, and 24 from Tarentum. The Metapontines assisted the Athenians in their Sicilian expedition (415 B.C.); they embraced the side of Pyrrhus in his war with the Romans, and after its conclusion fell under the Roman yoke. When Hannibal invaded Italy, the Metapontines after the battle of Cannæ were well disposed to him; but, on account of a garrison of Romans, were unable openly to desert to him till 212 B.C., when the city was occupied by a Carthaginian garrison. When Hannibal was compelled to leave Italy he removed, along with his own troops, the inhabitants of Metapontum; and from that time the city disappears from history.

Metaurus (now Metauro). A river in Central Italy, where Hasdrubal, brother of Hannibal, was defeated and slain, 207 B.C., when marching with abundant reinforcements for the latter. The Romans were led by Livius and Claudius Nero, the consuls. The latter commanded the head of Hasdrubal to be thrown into his brother's camp. This victory saved Rome.

Meter, or Metre. The French standard of linear measure, intended to be the ten-millionth part of the earth's quadrant, from the equator to the pole. It is equal to 39.370 British, or 39.369 American inches.

Methone (Modon). An ancient city of Messenia; was situated on the southwest coast. At the close of the second Messenian war it was given by the victorious Lacedæmonians to the exiled Nauplians, but was restored to its rightful owners by Epaminondas. An unsuccessful attack was made upon Methone by the Athenians in 418 B.C. It was made a free city by the emperor Trajan.

Métier (Fr.). Literally means any calling or business. In a military sense, it is peculiarly applicable to those nations which keep up large standing armies, and make war their principal object and pursuit. Chevalier Folard gives the following definition relative to the question which is often discussed on the subject of war, namely, whether war be a trade or a science. The English call it a profession. Folard, however, distinguishes it in this manner: *La guerre est une métier pour les ignorans, et une science pour les habiles gens*, "war in the apprehension, and under the management of ignorant per-

sons is certainly a mere trade or business, but among able men it becomes an important branch of science."

Metric System. The French system of measures, founded upon the metre. The system is decimal, and includes measures of length, area, volume, and weight.

Metulum. The chief town of the Iapydes in Illyricum; was near the frontier of Liburnia, and was situated on two peaks of a steep mountain. Augustus nearly lost his life in reducing this place, the inhabitants of which fought against him with desperate courage.

Metz (anc. *Diodorum*). A city and fortress of Alsace-Lorraine, situated on the Moselle. It was the Roman *Diodorum*, or *Meti*, capital of the Mediomatrici, a powerful Gaulish tribe (whose name it took at a later date), and of the kingdom of Austrasia, or Metz, in the 6th century; but in 985, Otho II. made it a free imperial city, and thereafter it was used by the German emperors as a barrier against France. It was besieged by Charles VII. in 1444, and could only preserve its freedom by the payment of 100,000 crowns. At length Henry II. obtained possession of it in 1562; and although it was besieged by Charles V. with an army of 100,000 men, his efforts were completely baffled by the skill and energy of the Duke of Guise, and by the courage and constancy of the townsmen; so that the French continued in possession of the town till it, along with Toul and Verdun, was formally secured to them by the peace of Westphalia in 1648. During the Franco-German war (1870-71) the emperor Napoleon III. arrived at Metz, and assumed the chief command, July 28, 1870. After the disastrous defeats at Wörth and Forbach, August 6, the whole French army, except the corps of MacMahon, De Failly, and Douay, was concentrated here, August 10, 11, and by delay was hemmed in by the Germans. Marshal Bazaine assumed the chief command on August 8, and on August 14 he was attacked at Courcelles, a little east of Metz. On August 16, Bazaine advanced from the fortress, but was attacked by the second army, under command of Prince Frederick Charles, at Vionville, and was compelled to retreat to Metz. But on August 17, Bazaine massed his troops for a decisive conflict, and on August 18 he gave battle at Gravelotte (which see), but was compelled to retreat again, and was shut up in the city. Prince Frederick Charles now surrounded the city, and then began one of the greatest sieges of history. After many brilliant sallies Bazaine was compelled to surrender, October 27, on account of starvation and sickness, with an army including 8 marshals, 66 generals, 173,000 men, including the imperial guard, 400 pieces of artillery, 100 mitrailleuses, and 53 eagles and standards; and on October 29 the Germans entered Metz. All the army that surrendered was compelled to go to Germany as prisoners of war. In May, 1871, Metz

was ceded to the German empire by the peace of Frankfort, and its fortifications greatly strengthened.

Meurtrières (Fr.). Small loop-holes, sufficiently large to admit the barrel of a rifle or musket, through which soldiers may fire, under cover, against an enemy. They likewise mean the cavities that are made in the walls of a fortified town or place.

Mexico. A federal republic of North America, next to the United States. It was conquered by the Spaniards under Cortez in 1521, and remained as a Spanish dependency for 300 years; and after a long struggle with the mother-country, which commenced in 1810, it shook off the Spanish yoke in 1821, and declared its independence. In 1824 the country was declared a federal republic, with a constitution similar to that of the United States, and its independence was acknowledged by Spain in 1836. About this time Texas, which was then the most northeastern of the Mexican states, withdrew from the federal league and became an independent republic. The Mexican general, Santa Anna, was sent to reduce them to subjection, but he was defeated and taken prisoner by the Texans. In 1845, Texas was annexed to the United States and admitted into the Union as a State. This led to a war between Mexico and the United States, by which the former lost all her northern provinces, consisting of Utah, California, and New Mexico, which were ceded to the United States in 1848. From this time the history of Mexico consists, for the most part, of a long series of insurrections, revolutions, and political changes, which followed each other in rapid succession. Santa Anna, who had been driven into exile shortly after his disgrace in Texas, was recalled and made dictator in 1853. He was succeeded in power by Gens. Carera, Alveraz, Comonfort, and Zulagosa. When the last named was made dictator in 1858, Benito Juarez, the Indian statesman, was declared constitutional president by the liberal party; a civil war ensued, anarchy and confusion reigned supreme in the country; but Juarez, taking advantage of the dissensions between Zulagosa and Miramon, the leaders of two opposite sections of the party that was hostile to his government, at last gained the ascendancy, and entered the capital as president of the Mexican republic in January, 1861. In the same year, in consequence of the enormities practiced by Juarez and his partisans, and the outrages committed on European merchants resident in the country, the governments of England, France, and Spain formed a triple alliance, and sent an expedition to Mexico to demand satisfaction for the injuries inflicted on the subjects of their respective countries, and to endeavor to bring about a more settled state of affairs. Vera Cruz was occupied by the allied forces, and this event was followed soon after by the convention of Soledad, signed in February, 1862, in which the government of Juarez engaged to comply with

the requisitions of the allies. But the French government disapproved of the convention, and although the forces of England and Spain were withdrawn in compliance with its terms, Napoleon III. determined to advance on the capital, with the view of effecting the overthrow of Juarez and placing the government of the country on a settled basis. The French troops were, however, delayed for some months before Puebla, which capitulated on May 18, 1868, and entered Mexico on the 8th of the following month, amid the acclamations of the people, who had become weary of the intestine strife that had so long convulsed the land, and which had been produced by the jealousy and rivalry of the party leaders who had aspired to the direction of the government. This event was followed by the proclamation of the empire and the nomination of Maximilian, the brother of the present emperor of Austria, as the first emperor of Mexico under the new régime. The republican leaders were violently opposed to this measure, and Maximilian by his severity towards them alienated the affections of many of his original supporters. At length, on the withdrawal of the French troops at the demand of the United States, the republicans advanced into Central Mexico. Maximilian with a Mexican force vainly attempted to oppose them, and was captured and shot at Queretaro, June 19, 1867.

Mézières. An ancient and well-built town of France, the capital of the department of Ardennes, situated on a peninsula formed by the Meuse. In 1520, the Chevalier Bayard successfully defended this place against 40,000 Spaniards under the Count of Nassau, and in 1815 it held out for two months against the Prussians, but was at length obliged to capitulate.

Miami Indians. A tribe of aborigines, of Algonkin stock, who formerly resided in Ohio and Indiana. In the war of 1812, they fought against the United States as allies of the British. In 1846 the majority of the tribe removed to Kansas, on a reservation in which State a remnant still resides.

Michigan. One of the Northern Central States of the United States. It was colonized by the French, near Detroit, in the latter half of the 17th century, but, like other French colonies in America, did not progress rapidly. At the peace of 1763, it came, with the other French possessions in North America, under the dominion of Great Britain, and so remained till the breaking out of the American Revolution, when it passed to the United States. On the expulsion of the French, the celebrated Indian chief Pontiac seized the occasion to rid the country of the hated whites by a general uprising, and simultaneous attacks on all the forts of the English on the lakes. Mackinaw was taken by stratagem, and the garrison mercilessly butchered. Detroit was besieged for some months by Pontiac, with 600 Indians; but it held out till the Indian allies, becoming weary of the siege, retired and left

Pontiac no choice but to make peace. The British surrendered Detroit to the United States in 1796. In 1805, Michigan, which up to that period had been a part of the Northwest Territory, was formed into a separate government. In 1812, it became the scene of some stirring events in the war with Great Britain. Lying contiguous to Canada, it was invaded in the very commencement of that struggle, and its capital (Detroit) surrendered August 15, 1812, by Gen. Hull, under circumstances which led to his displacement from his command. Previous to this Fort Mackinaw had been taken by the enemy. In January, 1813, a cruel massacre by the savages of a party of American prisoners took place at Frenchtown, but soon after, Gen. Harrison drove the enemy out of the Territory of Michigan, and removed the seat of war into Canada. Michigan became an independent member of the American Confederacy in 1837. During the civil war, she contributed greatly to the cause of the Union, and sent over 90,000 men to the field.

Micmacs. A tribe of Indians numbering about 4000, who reside principally in New Foundland, Prince Edward Island, and Nova Scotia. They were formerly faithful allies of the French in their wars with the New England colonies, and with the English, against whom they maintained a hostile attitude until about 1760.

Middle Ages. The ages or period of time about equally distant from the decline of the Roman empire and the revival of letters in Europe, or from the 8th to the 15th century of the Christian era.

Middle Assembling-bar. See ORDNANCE, CARRIAGES FOR, THE CAISSON.

Middle-chest. The front ammunition-chest on the body of the caisson,—so called because it is between the hind chest and the limber-chest when the caisson is limbered.

Middle-man. The man who occupies a central position in a file of soldiers.

Midea. A town in Argolia, of uncertain site; is said to have been originally called Persepolis, because it had been fortified by Perseus. It was destroyed by the Argives.

Midianites. An Arab race, descended, according to Scripture, from Midian, the son of Abraham by Keturah. They occupied the greater part of the country between the north side of the Arabian Gulf and Arabia Felix as far as the Plains of Moab. The Midianites were very troublesome neighbors to the Israelites till Gideon's victory over them (about 1249 B.C.), after which they gradually disappeared.

Mignon (Fr.). Picked soldier, now called *élite*.

Milan (Mediolanum, capital of the ancient Liguria). A city of Italy, the capital of the province of Lombardy, 78 miles northeast from Turin; is reputed to have been built by the Gauls about 408 B.C. It was conquered by the Roman consul Marcellus, 222 B.C. It was the seat of government of the Western

empire in 286; plundered by Attila in 452; taken by the emperor Frederick I., 1158; it rebelled and was taken by Frederick and its fortifications destroyed in 1162; but was rebuilt and fortified in 1169. The Milanese were defeated by the emperor Frederick II. in 1287; and the city was conquered by Louis XII. of France in 1499. The French were expelled by the Spaniards in 1525, and the city annexed to the crown of Spain in 1540; ceded to Austria, 1714. It was conquered by the French and Spaniards in 1748; reverted to Austria upon Sicily and Naples being ceded to Spain in 1748; seized by the French, June 30, 1796, retaken by the Austrians, 1799; regained by the French, May 31, 1800. The Milanese revolted against the Austrians, March 18, 1848, but submitted August 5, 1848. Another insurrection was attempted in 1858, but with disastrous results. On June 8, 1859, by the peace of Villa Franca, Lombardy was annexed to Piedmont, and Victor Emmanuel became sovereign of Milan.

Milazzo (anc. *Mylæ*). A fortified seaport on the north coast of Sicily, 18 miles west of Messina. It was founded about 700 B.C., and has been the scene of many battles. It was taken by Laches in 427 B.C. It was off *Mylæ* that the Romans, under their consul Duilius, gained their first naval victory over the Carthaginians, and took 50 of their ships, 260 B.C. Here also Agrippa defeated the fleet of Sextus Pompeius, 86 B.C. On July 20, 1860, Garibaldi with 2500 men defeated 7000 Neapolitans, at Milazzo, and compelled the garrison to evacuate the fortress.

Mileage. An allowance for traveling, as so much by the mile; especially in the United States, an allowance made to military officers to defray the expenses of their journeys on duty when not traveling with troops.

Milesian. A native or inhabitant of Ireland, descended according to the legendary history of the country from King Milesius of Spain, whose two sons conquered the island 1800 B.C., and established a new order of nobility.

Milesian. Pertaining to Ireland, from the tradition that King Milesius of Spain once conquered the country.

Miletus. A flourishing Greek city of Ionia, in Asia Minor, was situated on the north side of the peninsula of Mt. Grion, at the entrance of the Gulf of Latmus, nearly opposite the mouth of the Meander. At the time of the Ionian emigration to Asia Minor it existed as a town, but when the Ionians arrived in Asia, Neleus and a company of his followers seized Miletus, put to death all the male inhabitants, who were Carians or Leleges, and took the women for their wives. Miletus became for a time a prosperous city under the rule of Lydia and Persia, but in 500 B.C. it revolted against Persia, and after repeated defeats in the field, the city was besieged by land and by sea, and finally taken by storm in 494 B.C. The city was plundered and its inhabitants massacred, and the

survivors were transplanted to a place called Ampe, near the mouth of the Tigris. The town itself was given up to the Carians. Towards the end of the Peloponnesian war, Miletus threw off the yoke imposed upon her by Athens, and in a battle fought under the very walls of the city, the Milesians defeated their opponents; the Athenian admiral, Phrynichus, abandoned the enterprise. In 884 B.C., Alexander the Great took the city by assault, and destroyed a part of it, but it continued to flourish, until it was destroyed by the Turks and other barbarians.

Milford Haven. A town of Wales, in Pembrokeshire, 6 miles northwest from Pembroke. Here the Earl of Richmond, afterwards Henry VII., landed on his way to encounter Richard III., whom he defeated at Bosworth, 1485.

Milice. An old term for militia.

Militancy. Warfare. This term is obsolete.

Militant. Engaged in warfare; fighting; combating; serving as a soldier.

Militantly. In a militant manner. This term is rarely used.

Militar. Military. This term is obsolete.

Militarily. In a military or soldierly manner.

Militarist. One devoted to military pursuits.

Military. Pertaining to soldiers, to arms, or to war; having to do with the affairs of war; as, a military parade or appearance; military discipline. Engaged in the service of soldiers or arms; as, a military man. Warlike; becoming a soldier; as, military bravery, military virtue. Derived from the service or exploits of a soldier; as, military renown. Conformable to the customs or rules of armies or militia; as, the conduct of the officer was not military. Performed or made by soldiers; as, a military election.

Military. The whole body of soldiers; soldiery; militia; the army.

Military Academies. The great improvements made in the art of war in modern times, in weapons, drill, discipline, etc., has made warfare more of a science and less of a trial of brute force than formerly, and hence the necessity for a body of trained officers capable of moving, directing, and bringing into effective operation all the appliances of war with which modern armies are furnished. As this special training cannot be obtained at ordinary educational establishments, special schools for the purpose have been established in all civilized countries. A few of them are here noted.

GREAT BRITAIN.—The *Royal Military Academy*, an establishment at Woolwich, through which must pass all candidates for the artillery and engineers. It was instituted in 1741, but the present structure was not erected until 1805. It usually contains about 200 cadets. The age of admission is sixteen, and the vacancies are open to public competition. The parents or guardians have to make annual payments for the support of

the cadets as long as they remain at the academy, the amount being greater for the son of a civilian than of a military or naval officer. When the term of instruction—which comprises the subjects of a thorough general education, the higher mathematics, fortification, gunnery, and military duty—is completed, the cadets compete for vacancies in the engineers and artillery, those who pass the best examination being allowed a choice of either branch of the service. All who obtain commissions in the engineers proceed to Chatham for further instruction in their professional duties; the artillery cadets at once join the artillery as lieutenants.

Royal Military College, Sandhurst, is an institution for the training of candidates for commissions in the cavalry and infantry. The course is limited to one year immediately before entering the army, and the subjects of instruction confined to the higher mathematics, modern languages, and military science. Entrance is on the nomination of the commander-in-chief; and the payment by the cadets' parents or guardians varies according to their circumstances and rank. No payment is made for what are called "Queen's Cadets," who must be orphans. Commissions in the cavalry and infantry are given to the cadets in the order of merit at the end of the year.

The *Staff College* was founded in 1858, about 2 miles from Sandhurst, for the purpose of giving higher instruction to 80 officers aspiring to appointments on the staff. To be entitled to compete for entrance, an officer must have been three years in active service, must have passed the qualifying examination for a captaincy, and must have the recommendation of his commanding officer. A very strict examination decides which among the competitors shall be admitted to the college, one only being eligible from any battalion. The course lasts two years. At the end of each year there is an examination; that of the second fixing the order of the candidates' choice for staff employment. After passing the Staff College the officer is attached for duty, for a short period, to each of the arms with which he may not have already served. He then becomes eligible for appointment to the staff, as opportunity may occur. There are also the Royal School of Military Engineers at Chatham, for the instruction of engineer officers, the Royal Military School at Dublin, and professional schools for officers and enlisted men, as the School of Musketry at Hythe, and the School of Gunnery at Shoeburyness.

FRANCE.—The celebrated *Polytechnic School* at Paris was established by the National Convention, September 28, 1794. By a decree of July 16, 1804, Napoleon placed it under a military régime. No attempt being made to impart a general education, candidates are required to have a thorough general knowledge before they are admitted. The preliminary examination of candidates for admission comprises mathematics, phys-

ics, chemistry, history, German, etc.; in fact, the candidate to be successful should have the degree of Bachelor of Science. Admission is open to competition; a board of examiners passes through the country once every year, and examines all who present themselves, possessing the requisite qualifications of age, etc. A list is made out from the proceedings of the board, and the number of candidates highest in order of merit for whom there are vacancies admitted. The age of admission is from sixteen to twenty years, or if the candidate is in the army, to twenty-five. This school prepares students for various branches of the public service, for the staff, engineers, artillery, for the corps of hydrographical engineers, engineers of roads and bridges and of mines, the department of powder and saltpetre, etc. The number of cadets is usually about 850, and the course of instruction two years. After the final examination the first 80 or 40 candidates usually select civil employment under the government, those next in merit choose the artillery and engineers, and are sent to the School of Application, to pass through a technical course. The remaining students either fail to qualify, and leave the school, or receive commissions in the line, subordinate situations in the government service, civil or colonial, or they retire into civil life altogether.

The *Special Military School* at St. Cyr, near Versailles, was established for the instruction of candidates for commissions in cavalry and infantry. The age of admission is the same as for the Polytechnic School, and pupils are entitled to partial or entire state aid if they need it, as are also those of the Polytechnic. The course of instruction is two years, at the end of which time the more promising students pass to the Staff School, and thence, after a thorough course, to the *état-major* of the army; the remaining students pass as subalterns into the cavalry and infantry, selecting the arm of the service in which they desire to serve according to the order of merit in which they graduate. There are also the School of Application for Engineers and Artillery, the School of Application for the Staff, the Cavalry School at Saumur, for one year's instruction to officers of that arm, and the School of Musketry at Vincennes.

PRUSSIA.—The Prussian system of military education differs from that of France, in that competition is but sparingly resorted to, the object being to give a good general and professional education to all the officers, rather than a specially excellent training to a select few. For this purpose there are established seven cadet schools, one senior, at Berlin, and six junior, situated at Bensburg, Culm, Oranienstein, Ploen, Potsdam, and Wahlstatt. The age of admission to the junior schools is from ten to eleven years, and the usual course of instruction is for four years, and two or three at the senior school, followed by the finishing term of

nine months at a division school, when graduates are eligible to commissions. Some, however, are sent to the army to earn their commissions as other candidates. Others pass an additional year at the senior cadet school, in which case the term at the division school is dispensed with. After completing their course at the junior schools, students pass to the senior school without examination. They may also be admitted to the senior school without passing through the junior grade, provided they come up to the required standard of qualification. Aspirants for commissions must enter the ranks, and within six months pass a good examination in general and liberal knowledge if they are not graduates of a cadet school. Those who are graduates are not examined. After some further service the candidate goes for nine months to one of the division schools, which are eight in number, situated at Anklam, Cassel, Engers, Erfurt, Hanover, Metz, Neisse, and Potsdam. Here he completes his professional education, and if he passes the final examination, is eligible for the next vacancy in the line, but cannot be commissioned unless the officers of the corps are willing to accept him as a comrade. Candidates for commissions in the artillery and engineer corps, after graduating from the cadet school or passing an examination from the army, must pass nine months at the Artillery and Engineer School, after which they receive a provisional appointment as sub-lieutenants. Upon graduating, after two more terms of nine months each, they are commissioned as lieutenants. But the culmination of Prussian military education is the Staff School, or War Academy, which presents the highest prizes in the profession, and competition for which is open to all officers of the army who have had three years' service, and can produce testimonials of good conduct, ability, etc., from their superiors. Admission is by competitive examination, usually about 40 of the applicants being selected. The course of study lasts three years. During three months of each year the officers are sent to do military duty with arms of service or corps not their own. Of the 40 who pass through the Staff School each year, 8 or 10 only are sent to the topographical department of the staff. There they serve two or three years, at the expiration of which time two are selected from the number, and appointed captains on the staff. The remainder return to their regiments or corps, sometimes receiving appointments in the division schools.

AUSTRIA.—The Austrian military system of training is very elaborate, and commences at an early age,—boys intended for military service beginning their professional almost contemporaneously with their general education. There are schools of various orders for training non-commissioned officers and for officers, and senior departments for imparting more extended instruction to both classes. Candidates for appointment as non-

commissioned officers pass by competition through the lower houses, where they remain till eleven years old, the upper houses, which detain them till fifteen, and the school companies, whence, after actual apprenticeship to service, a few pupils pass to the academies as aspirants for commissions, and the others are drafted into the service as non-commissioned officers. For the education of officers there are four cadet houses, each containing 200 pupils. The boys are pledged to the service by their parents at the age of eleven, after which the state takes charge of them. At fifteen they pass according to qualification to the academy for the line, the engineer or artillery academy, and four years later receive their commissions in the arms of the service for which they have graduated. The young officer's chance of entering the Staff School—and therefore the staff—depends upon his place at the final academic examination.

The *Staff School* consists of 80 pupils selected by competitive examination from all arms of the service, 15 entering each year. The course of instruction is two years. To be qualified for admission a candidate must have served two years with his regiment, and be over twenty-one and under twenty-six years of age. The students receive appointments in the staff corps according to the order of merit, immediately after the final examination, if there are vacancies; if there are none, they return to their regiments until vacancies occur. If the successful candidate is a second lieutenant, he is promoted to the rank of first lieutenant; if a first lieutenant, he is promoted captain after three years' service.

RUSSIA.—Has 22 military colleges for the guards and line, containing over 7000 cadets, a school of ensigns for the guards, an artillery and an engineer school, averaging over 8000 military students. There is also an imperial staff school, into which 20 or 25 officers enter each year after examination. The term of instruction is for two years. Upon graduation, the most distinguished scholar is at once promoted to the rank of captain on the staff, and all the graduates are, from time to time, as vacancies occur, attached to the staff, but not immediately promoted in it.

Italy, Spain, and other powers have also their military academies, but those already given may be considered a fair type of all. It need only be stated that the educational status of the Italian officers is considered very high.

THE UNITED STATES.—The Military Academy at West Point is the only government institution in the United States for the military training of cadets and their preparation for the duties of officers. The necessity for such an institution was recognized at an early date in the history of the country. A committee of Congress which had visited the Continental army at New York recommended the establishment of a

military academy in their report, October 3, 1776. The subject was subsequently brought to the notice of Congress on several occasions, but without result until 1794, when provision was made for the establishment of 4 battalions of engineers and artillerymen, 8 cadets to be attached to each battalion. The number was increased to 56 in 1798, and provision made for procuring books and apparatus for their instruction. By the act of March 16, 1802, determining the military peace establishment, the artillerymen and engineers were made two distinct corps; 40 cadets were attached to one regiment of artillery, and 10 to the corps of engineers, said corps to be stationed at West Point, and to constitute a military academy. The act also provided that the senior engineer officer present should be superintendent of the academy, and authorized the Secretary of War to procure the necessary books, apparatus, etc., for the institution. Another act, dated February 28, 1808, authorized the President to appoint teachers of French and drawing. At the expiration of five years, however, further legislation was deemed necessary, and on April 12, 1808, a bill was passed which added 156 members to the corps of cadets. By the act of April 19, 1812, it was declared that the Military Academy should consist of the corps of engineers, the teachers of French and drawing already provided for, a professor of natural philosophy, a professor of mathematics, and a professor of engineering, with an assistant for each professor. Provision was also made for a chaplain, who was to officiate as professor of geography, physics, and history. The number of cadets was limited to 260; the requirements for admission, terms of study and service, and rate of pay and emoluments were also prescribed. But the commencement of its great success as an educational institution, and the reputation which the academy possesses for its elevating and disciplinary government, dates from July, 1817, when Brevet Maj. Sylvanus Thayer, of the engineer corps, assumed command as superintendent. He was an early graduate of the academy, had served with distinction in the war of 1812, and having studied in the military schools of France, had acquired matured views for the government of such an institution. He organized and perfected a system of management, which he carried into successful operation for sixteen years, and which, with but little modification, is followed to-day. In 1818 the department of geography, history, and ethics was organized, and the chaplain appointed professor; the clerical and secular duties thus combined have ever since remained inseparable. A professorship of chemistry, mineralogy, and geology was created by act of July 6, 1838, and an assistant authorized, "to be taken from the officers of the line, or cadets." In May, 1846, the teachers of French and drawing were styled professors, and the appointment

of assistants was authorized. In 1857 a professorship of the Spanish language was established. By act of Congress approved June 28, 1879, whenever a vacancy occurs in the office of professor of the French or Spanish language, both these offices shall cease, and the remaining one of the two professors shall be professor of modern languages. A professorship of law has also been established, which is held by an officer of the bureau of military justice. The academic staff consist of the superintendent; the commandant of cadets, who is instructor of artillery, cavalry, and infantry tactics, and is charged with the discipline of the cadets, having usually 8 officers detailed from the line of the army as assistants; and of the professors of civil and military engineering and science of war, of natural and experimental philosophy, of mathematics, of history, geography, and ethics (chaplain), of chemistry, mineralogy, and geology, of drawing, of French, of Spanish, and of law, all of whom have one or more commissioned officers as assistants. There are also detailed on duty several officers of the engineer and ordnance corps as instructors in practical military engineering, military signals and telegraphing, and in ordnance and gunnery. A sword-master is also employed. The military staff consists of an adjutant; a treasurer, quartermaster and commissary, of the battalion of cadets; a quartermaster, surgeon, and assistant surgeon. In 1848 the custom which had prevailed of appointing one cadet from each Congressional district received the sanction of law, and thus the number was limited to the number of Representatives. But as the District of Columbia and the army and navy were not represented, the President was empowered to appoint 1 cadet from the former and 10 cadets "at large," the latter to be selected annually from the army or navy, or any other quarter at his option, without regard to Congressional districts. The age for admission is from seventeen to twenty-two years, except when the candidate has served one year in the war of the Rebellion, in which case he may be admitted up to twenty-four, and the course of instruction is fixed at four years. Candidates must be able to read and write well, have a good knowledge of grammar, of geography, and history, particularly of the United States, and of arithmetic, including vulgar and decimal fractions. Examinations are held annually on January 1 and June 1. All newly-appointed cadets must report for examination by June 25, and none are examined after September 1, unless detained by sickness or other unavoidable cause, when they may be examined with the fourth class on January 1, and if found competent may proceed with that class. Each cadet on admission takes the oath of allegiance and binds himself to serve the United States for eight years, unless sooner discharged. For purposes of instruction, the cadets are divided into four classes, the fourth being the

junior class, and for matters of discipline the permanent organization is that of a battalion of infantry composed of four companies. During their academic course cadets receive \$500 a year and one ration a day. Upon graduating, the cadets highest in merit are usually commissioned as second lieutenants and appointed to the engineer corps, those next in order of merit to the artillery, and the remainder to the cavalry and infantry. Those for whom no vacancies exist at graduation are attached to regiments or corps as additional second lieutenants, and promoted second lieutenants as soon as a vacancy occurs in the arm to which they are attached. By act of Congress approved June 28, 1879, each member of the graduating classes of 1879-80 may elect, with the assent of the Secretary of War, to receive the sum of \$750 and mileage to the place of his residence in lieu of an appointment in the army, except in the event of war, until two years after his graduation. There is also an artillery school at Fort Monroe, Va., for the training of officers and enlisted men. The school is entirely conducted by commissioned officers, and the course of instruction is one year.

Military Asylum. See **SOLDIER'S HOME**.

Military Asylum, Royal. See **ASYLUM, ROYAL MILITARY**.

Military College. See **MILITARY ACADEMIES (SANDHURST)**.

Military Column. See **COLUMN, MILITARY**.

Military Discipline. Next to the forming of troops, military discipline is the first object that presents itself to our notice: it is the soul of all armies; and unless it be established among them with great prudence, and supported with unshaken resolution, soldiers become a contemptible rabble, and are more dangerous to the very state that maintains them than even its declared enemies. See **DISCIPLINE**.

Military Execution. The ravaging or destroying of a country or town that refuses to pay the contribution inflicted upon them. Also, the punishment inflicted by the sentence of a court-martial.

Military First Principles. Is the bodily training for a soldier, to make him hardy, robust, and capable of preserving health amidst fatigue, bad weather, and change of climate; to march at such possible pace, for such length of time, and with such burden, as without training he would not be able to do.

Military Frontier, The. A crown-land of the Austrian empire, bounded on the north by Croatia, Slavonia, and the Wojwodschaft, on the east by Transylvania and Wallachia, on the south by Turkey and Dalmatia, and on the west by the Adriatic, comprising an area of 12,800 square miles. The military frontier owes its origin as a crown-land to the necessity of having a permanent body of defenders on the borders during former wars, and especially during wars with the Turks.

In the 15th century the Austrians had gained from the Turks certain tracts of territory on the banks of the Save and Danube. These tracts they colonized, making it, however, a condition that the colonists must render military service against the Turks. The Warasdin frontier originated in the same manner under Ferdinand I. In the 17th century the Petrinier frontier, which at a later period received the name of the Banat frontier, was erected. The military stations along the frontier serve a threefold purpose,—the defense of the country, the prevention of smuggling, and the prevention of the spread of contagious disease into the territories of the Austrian empire. The inhabitants of this crown-land enjoy peculiar privileges. Their immigrant ancestors received only the temporary use of lands consigned to them; but in 1850 a law was passed making over the land to the occupiers as their own property. This right of property does not belong, however, to individuals, but to the family in a united sense. The oldest member of a family is intrusted with the management of the land; his partner ranks equal with him, and they each receive a double share of the profits. All who are able to bear arms are sworn to the service from their twentieth year. The soldier of the frontier, who is clothed as well as armed and supplied with ammunition by government, finds it his duty not only to watch and protect the frontier, but to preserve peace and order in the interior, and to go on foreign service when required. Only the smaller portion of the forces of the military frontier is retained in readiness for active service, while the remainder pursue their ordinary employments. To facilitate the accomplishment of the purposes aimed at by the military frontier, the *cordon*, a series of guard-houses along the whole frontier, affording accommodation to from 4 to 8 men, as well as larger ones, accommodating 12 men and a junior officer, has been instituted. Within this line are the officers' posts. Without announcing himself at the posts, no one is allowed to pass the boundary; and after permission is given the passenger must remain a longer or shorter time at the quarantine establishment, in order that all introduction of disease may be prevented.

Military Indications. Officers should study attentively the customs of their enemy, their hours for dining, commencing their marches, etc., and the many indications of intended movements which an enemy may unwittingly afford. The collection of boats, heavy guns, scaling-ladders, gabions, etc., at particular places, are indications that must always precede the passage of rivers, sieges, etc. If large magazines of stores or provisions are collected anywhere, it is clear that no retreat is contemplated; if, on the other hand, the parks of heavy, or spare guns, ammunition, engineer stores, etc., are being sent to the rear, a retreat is imminent, or being pre-

pared for. The dust raised by columns is a fair guide in some countries as to the numbers and composition of the force marching. That raised by cavalry forms a high, light cloud, by infantry, a lower and denser one, by parks and baggage, one more dense still. With a good glass you can sometimes learn from the manner in which troops move, and from their dress, whether they are regulars or militia, or if they belong to any special corps. The manner and bearing of people in a hostile country is usually a fair indication of the public spirit and feeling; if they are gloomy and anxious, it is an indication of want of confidence in their cause, and that their troops are distant; whilst if they are excited and insolent, it shows that they rely upon assistance near at hand, and anticipate success from the number and efficiency of their army. In following a retreating army much can be learned from its trail; if the *débris* of arms, accoutrements, etc., lie about, there is a want of transport, and it is a sign of demoralization, according to the extent to which it is the case; a large number of graves indicates the existence of disease in the enemy's army. The places where they halted for the night should be carefully examined; and all indications carefully noted. Did they bivouac or pitch tents; was their camp laid out with regularity; were their cooking-places neatly made. Is their track strewn with dead or dying transport animals; have they plundered the inhabitants or burnt their crops or houses; have they effectually or only partially destroyed the bridges, etc. The most insignificant circumstance affords sometimes whole pages of information to officers who, having studied the manners and customs of an enemy, know how to interpret them aright. Officers commanding small detached parties sent out on reconnoitring duties may many times avoid falling into the hands of strong patrols or detachments by learning their proximity from their track if crossed anywhere; the number and composition of such detachments may easily be estimated from it.

Military Knights. See **KNIGHTS, MILITARY**.

Military Law. See **LAW, MILITARY**.

Military Mines. See **MINES, MILITARY**.

Military Necessity. As understood by modern civilized nations, consists in the necessity of those measures which are indispensable for securing the ends of war, and which are lawful according to the modern law and usages of war. Military necessity admits of all direct destruction of life or limb of *armed* enemies, and of other persons whose destruction is incidentally *unavoidable* in the armed contests of war; it allows of the capturing of every armed enemy, and every enemy of importance to the hostile government, or of peculiar danger to the captor; it allows of all destruction of property, and obstruction of the ways and channels of traffic, travel, or communication, and

of all withholding of sustenance or means of life from the enemy; of the appropriation of whatever an enemy's country affords necessary for the subsistence and safety of the army, and of such deception as does not involve the breaking of good faith, either positively pledged, regarding agreements entered into during the war, or supposed by the modern law of war to exist. Men who take up arms against one another in public war do not cease on this account to be moral beings, responsible to one another, and to God. Military necessity does not admit of cruelty, that is, the infliction of suffering for the sake of suffering, or for revenge, or of maiming or wounding, except in fight, or of torture to extort confessions. It does not admit of the use of poison in any way, or of the wanton devastation of a district. It admits of deception, but disclaims acts of perfidy; and in general, military necessity does not include any act of hostility which makes the return to peace unnecessarily difficult.

Military Orders. Religious associations which arose from the mixture of the religious enthusiasm and the chivalrous love of arms which almost equally formed the characteristic of mediæval society. The first origin of such associations may be traced to the necessities of the Christian residents of the Holy Land, in which the monks, whose first duty had been to serve the pilgrims in the hospital at Jerusalem, were compelled by the necessity of self-defense to assume the character of soldiers as well as of monks. (See **SAINT JOHN OF JERUSALEM**.) The order of the Templars (see **TEMPLAR, KNIGHTS**) was of singular origin. Those of Alcantara and Calatrava (which see), in Spain, had for their immediate object the defense of their country against the Moors. These orders as well as that of Avis in Portugal, which was instituted with a similar view, followed the Cistercian rule, and all three differed from the Templars and the Knights of St. John in being permitted by their institute to marry once. The same privilege was enjoyed in the Savoyard order of Knights of St. Maurice, and the Flemish order of St. Hubert. On the contrary, the Teutonic Knights, who had their origin in the Crusades (see **GRAND MASTER**), were bound by an absolute vow of chastity. With the varying conditions of society, these religious associations have at various times been abolished or fallen into disuse; but most of them still subsist in the form of orders of knighthood, and in some of them, attempts have recently been made to revive, with certain modifications, the monastic character which they originally possessed.

Military Positions. See **POSITIONS, MILITARY**.

Military Punishment. See **PUNISHMENT, MILITARY**.

Military Regulations. The rules and regulations by which the discipline, formations, field-exercise, and movements of the whole army are directed, to be observed in

one uniform system. See **ARMY REGULATIONS**.

Military Science. See **LOGISTICS, STRATEGEM, STRATEGY, TACTICS, and WAR**.

Military Secretary. An officer on the personal staff of generals in high command. His duties are to conduct the correspondence of his chief, and to transact a great amount of confidential business, which would dangerously occupy the time of the general himself. In the British service the military secretary to the commander-in-chief is usually a general officer. To a commander-in-chief in the field, he is for most part below that rank, while to a general commanding a division only, an assistant military secretary is allowed. His staff pay is of course additional to the officer's regimental or unattached pay.

Military Service. In the feudal ages, a tenure of lands by knight's service, according to which the tenant was bound to perform service in war unto the king, or the mesne lord, of whom he held by that tenure. As the king gave to the great nobles, his immediate tenants, large possessions forever, to hold of him for this or that service or rent, so they in time parceled out to such others as they liked, the same lands for rents and services as they thought good. And these services were divided into two sorts, chivalry and socage; the first whereof was martial and military, whereby the tenant was obliged to perform some noble or military office unto his lord. This was of two kinds: either regal, that is, held only by the king, or common, when held of a common person. That which was held only of the king was called *servitium*, or *serjeantia*, and was again divided into grand and petit serjeantry. The grand serjeantry was where one held lands of the king by service, which he ought to do in his own person; as, to bear the king's banner or spear, to lead his horse, or to find a man-at-arms to fight, etc. Petit serjeantry was when a man held lands of the king, to yield him annually some small thing towards his wars, as a sword, dagger, bow, etc. Chivalry that might be holden of a common person was termed *scutagium*, or *escuage*; that is, service of the shield, which was either uncertain or certain. *Escuage uncertain* was likewise twofold: first, where the tenant was bound to follow his lord, by going in person to the king's wars, or sending a sufficient man in his place, there to be maintained at his cost so long as was agreed upon between the lord and his first tenant at the granting of the fee. The days of such service seem to have been rated by the quantity of land so holden; as, if it extended to a whole knight's fee, then the knight was to follow his lord forty days; if but a half a knight's fee, then twenty days; and if a fourth part, then ten days, etc. The other kind of this *escuage* was called *castleward*, where the tenant was obliged by himself or some other, to defend a castle as often as it should come to his turn.

Military Stores. See **STORES, MILITARY**.

Military Tenure. Tenure of land, on condition of performing military service.

Military Train. A highly important corps of the army of Great Britain, of which the function is to transport the provisions, ammunition, and all other material, together with the wounded in time of battle. It was formed after the Crimean war, on the dissolution of the Land-Transport Corps. In the year 1868 it comprised 6 battalions, in all 1840 officers and men. The corps ranks after the Royal Engineers, and is classed as Mounted Infantry, the officers receiving infantry rates, and the men cavalry rates of pay. The men are armed with carbine and sword, but rather for defensive than aggressive purposes. Attached to each battalion are 166 horses, with proportionate wagons and ambulances. It is proper to observe that the Military Train constitutes the nucleus of a transport service for a large army, and that in time of war it would be expanded by the addition of thousands of horses or mules, and the incorporation of many hundred drivers, etc. The advantage of possessing even a few men ready trained and capable of directing the movements of others was amply demonstrated by the failures of the Crimea in 1854-56; so that Parliament votes ungrudgingly the expense of this corps, although in time of peace it is comparatively without employment. It is now termed the Army Service Corps.

Military Ways. The large Roman roads which Agrippa caused to be made through the empire in the reign of Augustus for the marching of troops and conveying of carriages. They were paved from the gates of Rome to the utmost limits of the empire. The British have constructed a military road throughout India, with wells and other accommodations at certain distances.

Militia. From the Latin *miles*, a "soldier," a term which was formerly synonymous with "military," or the whole fighting force of a country, but in modern times has come to signify the domestic force for the defense of a nation, as distinguished from the regular army, which can be employed at home or abroad in either aggressive or defensive operations. Every nation has a reserve, under its law military, upon which its defense would fall on the discomfiture of the regular army; but the system differs in each country. France has her *Gardes Nationaux*, Prussia the *Landwehr* and *Landsturm*, and similar organizations exist in other European states. It also comprehends the volunteer organizations of Great Britain and the United States. The laws of the United States require the enrollment into the militia of all able-bodied males between the ages of eighteen and forty-five years, with certain exceptions specified in general and State laws. The militia of each State is required to be arranged into companies, battalions, regiments, brigades, and divisions, as the Legislature of the State may direct, and it shall

be subject to military duty and shall serve a definite time. These organizations are to be officered by the respective States, the grades and number of officers being named in the laws requiring enrollment. The Constitution of the United States has given the power to Congress to provide for "calling forth the militia to execute the laws of the Union, suppress insurrections, and repel invasions." Congress by legislation has given the President the authority to call forth the militia under certain exigencies, as has been frequently done. When called into actual service of the United States, the militia receive pay from the government, and are subject to the Rules and Articles of War. The militia is therefore a part and parcel of the army of the United States, although in common use the term is limited to mean the regular army alone. The organized militia of the United States numbers 125,906 men, the number of men available for military duty unorganized, is 6,598,105.

Militia-man. One who belongs to the militia.

Mill, Gunpowder-. Is a machine used for mixing or incorporating the ingredients of which gunpowder is composed. The operation was formerly effected as follows: The ingredients being duly proportioned and put into the mortars of the mills, which are hollow pieces of wood, each capable of holding 20 pounds of paste, are incorporated by means of the pestle and spindle. There are 24 mortars in each mill, where are made each day 480 pounds of gunpowder, care being taken to sprinkle the ingredients in the mortars with water from time to time, lest they should take fire. The pestle is a piece of wood 10 feet high, and 4½ inches broad, armed at the bottom with a round piece of metal. It weighs about 60 pounds. For more modern methods of incorporation, see **GUNPOWDER**.

Mill Springs. A village of Wayne Co., Ky., about 100 miles south of Frankfort. Near here a Federal force under Gen. Geo. H. Thomas defeated a Confederate army under Gen. G. B. Crittenden, January 19, 1862. In this engagement the Confederate general F. K. Zollicoffer was killed.

Mill-cake. The incorporated materials for gunpowder, in the form of a dense mass or cake, ready to be subjected to the process of granulation.

Milliken's Bend. A village of Madison Parish, La., on the right bank of the Mississippi River, about 25 miles above Vicksburg. On June 6, 1863, the Confederates under Gen. McCullough made an attack on this place, which was defended by a body of colored troops and part of an Iowa regiment, and were repulsed after a severe engagement.

Mim Bashi. In the East Indies, a commander of 1000 horse.

Minas, Sabbath. A fort in Babylonia, built in the time of the later Roman empire on the site of Seleucia, which the Romans had destroyed.

Mincio. A river of Lombardy, Italy. Here the Austrians were repulsed by the French under Brune, December 25-27, 1800, and by Eugene Beauharnais, February 8, 1814, near Valeggio.

Minden. A strongly fortified town of Prussia, in Westphalia, situated on the Weser, 35 miles southwest from Hanover. In its neighborhood the battle of Minden was fought, on August 1, 1759, between the English, Hessians, and Hanoverians (under Prince Ferdinand of Brunswick), and the French were beaten and driven to the ramparts of Minden. Lord George Sackville (afterwards Lord Germaine), who commanded the British and Hanoverian horse, for some disobedience of orders was tried by a court-martial on his return to England, found guilty, and dismissed April 22, 1760. He was afterwards restored to favor, and became secretary of state, 1776.

Mines, Military. Constitute one of the most important departments in military engineering, and a very formidable accessory both in the attack and defense of fortresses. A military mine consists of a gallery of greater or less length, run from some point of safety under an opposing work, or under an area over which an attacking force must pass, and terminating in a chamber, which, being stored with gunpowder, can be exploded at the critical moment. Mines are of use to the besiegers in the overthrow of ramparts and formation of a breach; the *countermines* of the besieged in undermining the glacis over which the assaulting column must charge, and blowing them into the air, or in destroying batteries erected for breaching, are equally serviceable. But far above the actual mischief wrought by the mine—often very great—is its moral influence on the troops, and especially on the assailants. Mines are either vertical,—when they are called *shafts*,—horizontal, or inclined, in either of which cases they are "galleries," the word "ascending" or "descending" being added, if there be inclination. The dimensions range from the "great gallery," 6 feet 6 inches by 7 feet, to the "small branch,"—the last diminutive of the gallery,—which has but 2 feet 6 inches height, with a breadth of 2 feet. The most frequent work is the "common gallery," 4 feet 6 inches by 8 feet, which is considered the easiest for the miner.

Minie Ball. A ball or bullet of peculiar construction. It is cast hollow for nearly two-thirds of its length, and into the opening of the internal cylinder there is introduced a small concave piece of iron, which the powder at the moment of firing forces into the slug, spreading it open, and causing it to fit perfectly to the barrel. Hence a great increase in the precision of aim and the extent of range.

Minie Rifle. A species of fire-arm, invented by Capt. Minié, from whom it receives its name. It is certain in aim, and fatal in its results at 800 yards

Mining. In military affairs, is the art of blowing up any part of a fortification, building, etc., by gunpowder. The art of mining requires a perfect knowledge both of fortifications and geometry; and by these previous helps, the engineer may be qualified to ascertain correctly the nature of all manner of heights, depths, breadths, and thicknesses; to judge perfectly of slopes and perpendiculars, whether they be such as are parallel to the horizon, or such as are visual; together with the true levels of all kinds of earth. To which must be added, a consummate skill in the quality of rocks, earths, masonry, and sands; the whole accompanied with a thorough knowledge of the strength of all sorts of gunpowder.

Minion. An ancient form of ordnance of small size, the caliber of which was about 8 inches.

Minister. Is one who acts not by any inherent authority of his own, but under another. Thus, in England all ministers act under a supreme authority, which is vested in the sovereign, lords, and commons, to whom they are responsible. In military matters, there is not only a war minister, but a secretary at war, who likewise acts conjointly with the secretary of state. All dispatches and papers of consequence relating to the army must first pass through the secretary of state, and the war minister, before they are laid before Parliament, or otherwise acted upon by the secretary at war. The common arrangements of corps, directions with respect to marching, are transmitted to the secretary at war, and to the quartermaster-general's office, without previously passing through the secretary of state, or war minister. See SECRETARY OF WAR.

Minnesota. One of the Northwestern States of the American Union. The country was visited by white traders as early as 1654, but very few settlements were made in it until about 1845. The eastern part of the State formed a portion of the French possessions which were ceded to the British in 1763, and by them to the United States in 1783. The remaining part belonged to the Louisiana Territory, which was purchased from the French in 1803. The country was traversed by an exploring expedition under Gen. Pike in 1805. A territorial government was organized in 1849, and in 1858 Minnesota was admitted into the Union as a State. The State suffered severely in 1862 from an invasion of the Sioux, who destroyed whole settlements. They were soon afterwards, however, summarily punished, and removed from the State altogether.

Minnetarecs. A tribe of Indians, formerly a branch of the Crows, but now affiliated to the Mandans, who reside on the Upper Missouri. They have always been friendly to the whites, and hostile to the Sioux, at whose hands they have suffered severely. They number about 400.

Minor. Under age. Minors will not be

enlisted in the army of the United States without the consent of their parents or guardians. If any have enlisted and it becomes known, the Secretary of War, on demand, is required to grant the discharges from the army of minors who have enlisted without the consent of their parents or guardians.

Minorca. One of the Balearic Islands (which see) in the Mediterranean. It was captured by Lieut.-Gen. Stanhope and Sir John Leake in 1708, and was ceded to the British by the treaty of Utrecht in 1713; taken by the Spanish and French in July, 1756, and Admiral Byng fell a victim to public indignation for not relieving it. It was restored to the British at the peace in 1793; besieged by the Spaniards, and taken February 5, 1782; captured by the British under Gen. Stuart, without the loss of a man, November 15, 1798; but was given up at the peace of Amiens in 1802.

Minturnæ (*Minturnensis*; now *Trajetto*). An important town in Latium, on the frontiers of Campania; was situated on the Appia Via, and on both banks of the Liris, and near the mouth of this river. It was an ancient town of the Ausones, or Aurunci, but surrendered to the Romans of its own accord, 296 B.C. In its neighborhood Marius was taken prisoner.

Minute. A hasty sketch taken of anything in writing. Hence minutes of a general or regimental court-martial.

Minute-gun. A gun discharged every minute, as a signal of distress or mourning.

Minute-man. A man enlisted for service wherever required, and ready to march at a moment's notice;—a term used in the American Revolution.

Minutes of Councils in the Military Department. The notification of orders and regulations, which are directed to be observed by the British army in India, are so called. These minutes receive the sanction of the governor-general in council, and are the result of previous communications from the court of directors in Europe. The answer to the French word, *resultat*, which was prefixed to all orders and regulations that were occasionally issued by the military boards, or *conseils de guerre*, for the government of the army. The term, *jugement d'un conseil de guerre*, corresponded with our minutes of a general or garrison court-martial, and expressed not only the minutes, but the sentence of the court.

Miquelets (*Fr.*). Bandits, who have infested the Pyrenean Mountains; armed mountaineers of the Pyrenees; the name is now borne by the captain-general's guard; in 1808, Napoleon organized a corps of *miquelets Français*, who rendered good services.

Miqueletti. A small body of mountain fusiliers, who formerly belonged to the Neapolitan army.

Mire (*Fr.*). In the French artillery, a piece of wood about 4 inches thick, 1 foot

high, and 2½ feet long, which is used in pointing cannon.

Mireur (*Fr.*). An instrument employed in coast batteries for ascertaining whether the enemy's ships are within the range of the guns, and thus to prevent the gunners from expending their shot unnecessarily.

Mirmillones. A class of Roman gladiators; said to have been so called from their having the image of a fish on their helmets. Their arms were like those of the Gauls; hence we find that they were also called Galli. They were usually matched with the *retarii* or Thracians.

Mirror. See INSPECTION OF CANNON; also LOOKING-GLASS SIGNALING.

Misbehavior before the Enemy. See APPENDIX, ARTICLES OF WAR, 42.

Miscellaneous. An item or charge in the estimates of the British army, so distinguished as *miscellaneous services*; the same as our contingent expenditures.

Misconduct at Divine Service. See APPENDIX, ARTICLES OF WAR, 52.

Misconduct in Time of War. See APPENDIX, ARTICLES OF WAR, 55, 56, 57, and 58.

Misericorde (*Fr.*). A short dagger, which the cavalry formerly used, for the purpose of dispatching an enemy who would not ask quarter or mercy.

Misnomer. The mistaking of the true name of a person; the using of one name for another. If a prisoner plead a misnomer before a court-martial, the court may ask the prisoner what is his real name, and call upon him to plead to the amended charge.—*Hough*.

Miss. To fail to hit; to fly wide; as, the bullet missed its mark.

Missile. Capable of being thrown; adapted for hurling, or to be projected from the hand, or from any instrument or engine; as, to wing the missile dart.

Missile. A weapon thrown or intended to be thrown, for doing execution; as, a lance, an arrow, or a bullet.

Missing. Wanting; not present when called or looked for; lost; as, 100 soldiers are wounded and missing.

Mississagas. A tribe of Indians of Algonkin stock, who formerly resided on the north shore of Lake Huron, but are now found to the number of 700 in Ontario. They were one of the Confederate tribes of the "Seven Nations," fought as allies of the French against the English (1748-48), sided with the English in the seven years' war against the French and in the war against Pontiac, and aided the Canadian forces against the United States in the war of 1812.

Mississippi. One of the Southwestern States of the American Confederacy. It was first visited by Europeans about the year 1640, when De Soto, with 1000 followers, crossed the State on an exploring expedition from Florida, and remained in it for nearly a year. This party having suffered severely by attacks from the aborigines, no

other attempt was made to establish a permanent colony till 1682, when La Salle descended the Mississippi and visited this region. He returned in two years with a party which he intended to settle in Mississippi, but meeting with misfortunes, the colony never reached its destination. The next attempt at settlement was made by Iberville, but with no successful result. The settlement at Fort Rosalie (now Natchez) in 1718, by some Frenchmen under Bienville, was generally considered the first permanent colony. A general massacre of the white inhabitants by the savages took place in 1728, but, as in every other contest between the Indians and the whites, victory ultimately rested with the latter. Other conflicts in 1736, 1739, and 1752, though carried on for a time with varying success, had the same result. At the peace of Paris, in 1763, Mississippi became a part of the English territory. Soon after a portion of the French, so inhumanly driven by the English from Nova Scotia, settled in Mississippi; and in 1768 commenced an emigration from the Eastern colonies by way of the Ohio and Mississippi Rivers. In 1798 the United States having attained the rights of the British government in this region, erected it into a Territory, and in 1817 it was admitted into the Union as an independent State. Mississippi was one of the first of the Southern States to secede from the Union, and it suffered severely during the civil war. It was the scene of several engagements, raids, etc., the most important being the battles of Iuka, Corinth, siege and capture of Vicksburg, and raids to Meridian.

Missive. Intended to be thrown, hurled, or ejected; missile. "The missive weapons fly."

Missolonghi, or **Mesolonghi**. A town of Greece, in the government of Ætolia, is separated from the sea by a large lake. It is noted for the memorable siege it sustained in 1825-26. In the beginning of 1825 it was garrisoned by 5000 Greeks, who were commanded by Nōthi Bozzaris; and on April 25 of the same year a Turkish force of 20,000 under Reshid Pasha appeared before Missolonghi, which was poorly fortified. On May 11, the first bombardment began, and for the space of two months afterwards the town was exposed to numerous bombardments and assaults; but the defenders were not less active in answering the enemy's fire, and making sallies from their defenses, by which means they succeeded in repelling their assailants, and inflicting on them considerable loss. During this time they were supplied with ammunition and provisions by the fleet which was stationed at the entrance of the lake; but on July 10, a superior Turkish fleet, after compelling the ships of Greece to retire, succeeded in landing a strong reinforcement to the besiegers. The assaults on the town were then renewed with increased fury, and the cannonade of the Turks carried destruction to its frail ramparts and death

among the ranks of its brave defenders. Yet the garrison, though reduced to the number of 4000, continued to maintain their ground until, in the month of August, the Greek fleet appeared in the offing, and by defeating the Turkish squadron relieved Missolonghi for a time from the blockade. But the sultan was resolved at all hazards to reduce this stronghold of liberty; and in the end of November the Greek ships were again driven off, and the blockade renewed by the combined Turkish, Egyptian, and Barbary fleets. In the beginning of 1826 the besieging army was reinforced by the arrival of 14,000 troops under Ibrahim Pasha, who took command of all the besieging forces. On January 25, a bombardment was commenced, which lasted for three days, and reduced the town to ruins, but could not shake the resolute courage of the Greeks. The repeated assaults of the enemy were still repulsed with great loss. At last, reduced to the utmost extremities by famine, and seeing on all sides nothing but the ships and tents of the enemy, yet never entertaining any thought of surrender, the Greeks determined to force their way through the opposing ranks. Although by treachery the enemy was made aware of their design, and thus prepared to meet them, they were not able to prevent nearly 2000 of the besieged from making their way to the mountains. Many prisoners fell into the hands of the Turks, and the remainder, who were unable from their wounds or weariness to accompany their fellows, continued to defend themselves among the ruins until the explosion of a powder-magazine, destroying alike friends and foes, put an end to the bloody conflict. Such was the siege of Missolonghi, which attracted, during its continuance, the eyes of all Europe, and in which the Greeks showed themselves the worthy sons of the heroes of Marathon and Thermopylae.

Missouri. One of the Central States of the Mississippi Valley, and the first organized wholly west of the Mississippi River. The French were the earliest settlers in the country, having built a fort there in 1719. By the treaty of 1763 it was ceded to Spain, with all the territory west of the Mississippi. Spain being at war with England during the American Revolution, her colonies were harassed by the English and their Indians allies. In 1780, a body of British and Indians attacked and besieged St. Louis, killing 60 of its defenders. The siege was raised by Col. Clark, an American, who came to the relief of the place with 500 men. In 1800 Spain restored the territory to France, and it passed to the United States by purchase in 1803. After the admission of Louisiana as a State in 1812, the remaining portion of the territory received the name of Missouri, from which was separated the State of that name in 1821. Though the State officially declared itself in favor of the Union in 1861, many of its prominent citizens sided with the Confederates. It was

the scene of several engagements during the civil war.

Missouria Indians. A tribe of Dakota stock, who reside at the Otoe agency, Nebraska. They number about 200, and are progressing favorably in the arts of civilization.

Mithridatic War. The name of the celebrated contest carried on for a long series of years by the Romans against Mithridates VI., king of Pontus. It was caused by the massacre of about 100,000 Romans by Mithridates, 88 B.C., and remarkable for its duration, its many sanguinary battles, and the cruelties of its commanders. Mithridates having taken the consul Aquilius, made him ride on an ass through a great part of Asia, crying out as he rode, "I am Aquilius, consul of the Romans." He is said to have killed him by causing melted gold to be poured down his throat, in derision of his avarice, 85 B.C.

Mitigate. To diminish the severity of; as, to mitigate punishment; to reduce in amount of severity, as a penalty. See APPENDIX, ARTICLES OF WAR, 112.

Mitraille (Fr.). Small pieces of old iron, such as heads of nails, etc., with which pieces of ordnance are sometimes loaded.

Mitraille. A gun in which several barrels are combined in order to produce a greater effect by the rapid succession of a number of shots. Mitrailleuses existed as early as the 14th century. They were called *killing-organs* at that time. The Scaligers at the end of the 14th century, the Protestant princes of Germany in the Smalkaldian war, and Austria in the war against Turkey, used this kind of gun. But the ancient mitraille differs from the modern both in dimensions and in the positions of the barrels. A peculiar kind of mitraille was the *espingol*, each barrel being loaded with several shots, which, by a slowly-burning charge, were discharged one after the other. The *espingol* was used not only in the Middle Ages, but also recently,—by the Danes in 1848–50, and 1868–64. At the storming of Düppel the Prussians took about thirty such guns. In modern times the term has been specifically applied to certain battery guns employed by the French in the Franco-Prussian war. (See BATTERY GUN.) In the U. S. Light Artillery Tactics the term mitraille is applied to the Gatling gun.

Mitylene, or Midulu (anc. Lesbos). An island of the Grecian Archipelago, belonging to Turkey, and lying off the west coast of Asia Minor. Mitylene suffered much in the Greek war of independence, in the course of which it lost nearly the half of its inhabitants. (See MITYLENE.)

Moabites. A tribe descended from Moab, the son of Lot, and consequently related to the Hebrews; they inhabited the mountainous country east of the lower part of the Jordan and of the Dead Sea. In the time of the Judges, the Jews were for eighteen years under the yoke of the Moabites,

who were afterwards made tributary by David, but about 900 B.C. shook off their allegiance to the Jewish kings, and after the Assyrians invaded the land of Judah, took part with the Chaldeans against the Jews.

Moat. The ditch round the ramparts of a fortress may be either wet—i.e., full of water—or dry. In the latter, which is the commoner case, the depth should not be less than 12 feet, nor the width under 24. The more perpendicular the walls, so much the greater will be the obstruction to the enemy. In regular works the walls are usually reveted with masonry, that at the foot of the rampart being the scarp or escarp, and that below the covered way the counterscarp. See **DITCH**.

Mobile. A city and capital of Mobile Co., Ala., situated on the west bank of the Mobile River, immediately above its entrance into the bay of the same name. It was founded by Bienville in 1711, passed into the hands of the English in 1763, was taken by the Spanish general Galvez in 1780, and was confirmed to Spain by the treaty of 1783. Mobile was blockaded by the Federal fleet in May, 1861. In 1864 the Confederates constructed several ironclads and gunboats, and threatened to raise the blockade. On August 5, Admiral Farragut with his fleet passed Forts Morgan and Gaines, the Confederate fortifications guarding the entrance to Mobile Bay, captured the ram "Tennessee" and the gunboat "Selma," and effectually crippled the "Gaines." With the co-operation of the land forces, the forts were soon captured, and the city was effectually cut off from external commerce. Mobile was evacuated by the Confederates, and surrendered to Gen. Canby and Rear-Admiral Thatcher, April 12, 1865, about 1000 prisoners, 150 guns, and a large quantity of ammunition and supplies falling into the hands of the Federals.

Mobilization. The calling into active service troops not previously on the war establishment.

Mobilize. To call into active service;—applied to troops which, though enrolled, were not previously on the war establishment.

Moccasin (Algonkin, *makisin*). A shoe or cover for the foot, made of deer-skin or soft leather, without a sole, and ornamented on the upper side; the customary shoe worn by the American Indians.

Möckern. A town of Prussian Saxony, 13 miles east of Magdeburg, on the Elbe. Here the French army under Eugène Beauharnais was defeated by the Prussians under York, April, 1813, and here Blücher defeated the French, October 16, 1813.

Modena (anc. *Mutina*). A fortified city of Northern Italy, 24 miles west-northwest of Bologna, capital of the former duchy of the same name. In ancient times Mutina was an important town of Gallia Cispadana,

situated on the Via Æmilia; it fell into the hands of the Romans in 218 B.C., who established a colony here thirty-five years later; in 117 B.C. the settlers were disturbed by an incursion of the Ligurians, who for a short time held possession of the town, but were ultimately expelled by Consul Claudius; it was held by M. Brutus against the victorious Pompey; sustained a siege of about four months against the troops of Mark Antony; besieged and taken by Constantine in 312; was laid waste by Attila in 452. The modern town is surrounded with walls, and defended by bastions and a citadel; was governed by the house of Este from 1288 till 1796, when the last male of that house, the reigning duke, Hercules III., was expelled by the French. By the treaty of Campo Formio the Modenese possessions were incorporated with the Cisalpine republic, 1797, and with the kingdom of Italy, 1805. The Archduke Francis of Este, son of the Archduke Ferdinand of Austria, and of Mary, the heiress of the last duke, was restored in 1814. Modena was annexed to Sardinia March 18, 1860.

Modocs. A treacherous tribe of Indians of the Klamath nation. In 1872 they left the Klamath reservation under the leadership of their chief, Captain Jack, and refused to return. Military aid was invoked to compel them, and the troops were fired upon by the Indians, who retreated to the almost inaccessible fastnesses of the lava-beds. Here they held out until June 5, 1873, by which time nearly all were killed or captured. Captain Jack and some of the principal men of his tribe were tried by military commission for the murder of Gen. Canby and Mr. Thomas, Indian peace commissioner, who were treacherously slain in April while attending a conference with the Indians outside the camp. Captain Jack and three others were hanged October 8, 1873, and the remainder of the tribe deported to Indian Territory.

Moesia. A Roman province in Europe. It was invaded by the Romans, when C. Scribonius Curio gained a victory over the Mœsians (75 B.C.), but not until the reign of Augustus was it finally subdued, 29 B.C. A line of fortresses was then planted for its defense along the southern bank of the Danube. The principal of these were afterwards known as Singidunum (Belgrade), Viminacium, and Axiopolis. It was successfully invaded by the Goths, numbers of whom eventually settled here. In the 7th century invading hordes of Bulgarians and Slavonians founded the kingdoms of Bulgaria and Serbia, which now comprise the territory of ancient Moesia.

Mogador, Mogodor, or Suerrah. A seaport town of Morocco, on the Atlantic, 182 miles southwest from Morocco. Mogador is walled and fortified; but its defenses, which are the work of Genoese engineers, are of no great strength; its harbor, although much exposed, is considered the best on the coast.

Mogador was bombarded in 1844 by a French fleet under the Prince de Joinville, on which occasion it suffered severely.

Mognions (*Fr.*). A sort of armor for the shoulders.

Mograbian. A soldier of a branch of the Turkish infantry composed of the peasants of the northern part of Africa, who sought to better their condition by entering foreign service.

Mogul Empire, The. An empire which at one time extended over the greater part of Northern India. It was founded by Sultan Baber, a descendant of Timur (or Tamerlane), in 1526, and lasted until 1749, when the Mogul army was totally defeated by the Rohillas, and the empire was broken up into a number of petty sovereignties. In 1857, Mohammed Bahadur, the last king of Delhi and head of the Mogul empire, joined in the Indian mutiny, and was transported to Rangoon (1858), where he soon after died.

Mohacs. A town of Southern Hungary, on the western arm of the Danube. It owes its historical importance to the great battle fought here, August 29, 1526, between Louis II. of Hungary, with 25,000 Hungarians, and the sultan Solymán, at the head of about 200,000 Turks. The battle resulted in the disastrous defeat of the Hungarians, who lost their king, seven bishops, many nobles and dignitaries, and upwards of 22,000 men. A second battle was fought here on August 12, 1687, when the Turks in their turn were defeated by an Austro-Hungarian army under Charles of Lorraine.

Mohammerah. A Persian town near the Euphrates; captured, after two hours' cannonading, by Sir James Outram, during the Persian war, March 26, 1857.

Mohawks, or **Maquas**. A warlike tribe of Indians who formerly inhabited the valley in the State of New York which bears their name. They were allied with the Onondagas, Oneidas, Senecas, Cayugas, and Tuscaroras, the confederation constituting what was known as the "Five Nations." They were allies of the English in their wars with the French, and in the Revolutionary war. After the peace of 1783 they removed to Upper Canada, and settled on Grand River upon lands procured for them by their chief, Brant.

Mohegans, or **Mohicans**. A tribe of Indians of Algonkin stock, who formerly inhabited a considerable part of New England, and a part of New York. The town of Norwich, Conn., called Mohegan by the Indians, is situated about the centre of their ancient country. When the English first settled at Hartford, Uncas, the chief of the tribe, formed a treaty of amity with them, which appears to have been generally observed. The Mohegans were long the sworn foes of the Narragansetts. The latter, under their chief, Miantonomoh, invaded the Mohegan country in 1643, but were defeated by Uncas, who captured Miantonomoh and put him to death in September of that year. In

1645, the Narragansetts, under Passacus, the brother of Miantonomoh, burning to avenge the death of that chief, again invaded the Mohegan territory. On this occasion they were more successful. They laid waste the country in all directions, and compelled Uncas and his warriors to take refuge in his strong fortress at Shantock, which they would probably have become masters of but for the timely assistance of the English, who furnished a supply of provisions to the besieged. The invasion was again repeated, and with almost fatal effect to Uncas. The English again saved him, however, and after nearly twenty years of strife the hatchet was at length buried between these tribes.

Mohilow. A town in Russia, where the Russian army under Prince Bagration was signally defeated by the French under Marshal Davoust, prince of Eckmühl, July 28, 1812.

Mohrungen. A town of East Prussia, 62 miles south-southwest of Königsberg. The French defeated the Russians here in 1807.

Moienne (*Fr.*). A piece of ordnance, which is now called a 4-pounder, and which is 10 feet long, was formerly so called.

Moineau. A small, flat bastion, raised in front of an intended fortification, to defend it against attacks from small-arms.

Mojave Indians. A tribe of aborigines, of Apache stock, residing in Arizona. They number about 2100, of whom about one-third are located on a reservation on the Colorado River, and about an equal number (known as Mojave Apaches) at the San Carlos agency, Arizona.

Moldavia. A province in the northeastern part of Turkey in Europe. The princes of Moldavia were formerly called *voyvodes*, or military leaders, a name which was afterwards changed by the Turks to that of *hospodars*, which is still retained. In the 13th century Moldavia was frequently disturbed by civil war, occasioned by rival claimants for the crown, and these dissensions rose to such a height that the country was divided into two parts, one of which acknowledged the sovereignty of Poland, and the other that of Hungary. A union was, however, soon after effected, and Moldavia became subject to Hungary, paying at the same time a tribute to the Poles. In 1586 Moldavia came under the protection of the sultan; for a considerable time after this period, it was the scene of constant wars between the Poles and Turks, until the claims of the former to the sovereignty of the state were finally abandoned in 1621, and peace concluded between Turkey and Poland; in 1788, during the war of Austria and Russia against Turkey, Moldavia was invaded by a Russian force, and occupied for two years, but was evacuated after the peace of Belgrade; in 1769 it was again occupied by the Russians, and became for a short time subject to the czar, but was restored to Turkey in 1774; in 1789 this unfortunate principality was again

the scene of contest between Russia and Turkey, until the peace of Jassy in 1792, when the Russian frontier was fixed by the Dneister; in the war of 1807-12, Moldavia again fell into the hands of the Russians, who, by the treaty of Bucharest, acquired possession of Bessarabia, and thus extended their frontier to the Pruth. At the commencement of the Greek war in 1820 an insurrection broke out in the Danubian principalities, but it was suppressed by the Turks; in 1828 another war between Turkey and Russia broke out, and Moldavia was occupied by the Russians without opposition until peace was established by the treaty of Adrianople in 1829. A conspiracy was formed in 1840, to unite the principalities of Moldavia and Wallachia into one state, but without success. In 1848 the influence of revolutionary sentiments was felt in Moldavia; the people of Jassy demanded a new constitution, and, although the hospodar successfully resisted this movement, he laid down his authority in the same year. In 1853 a Russian army took possession of Moldavia and Wallachia; after attempting in vain to cross the Danube in Wallachia, the Russians, in the spring of 1854, crossed that river at Galatz, and seized the fortresses in the Dobrudscha; they then proceeded to lay siege to Silistria, but this town was so vigorously defended that they were obliged to raise the siege, and the British and French troops having arrived at Varna, the Russian army evacuated the principalities in the autumn of 1854; the hospodars then returned to their respective governments, and the principalities were occupied by an Austrian army. At a conference at Paris, August 19, 1858, it was decided that the principalities should thenceforth be called the United Principalities of Moldavia and Wallachia, and should have in common a central commission and court of appeal, but be governed by different hospodars, to be elected by the people, and confirmed by the Porte.

Molded Powder. See GUNPOWDER.

Mole. A mound or massive work formed of large stones laid in the sea, extended either in a right line or an arc of a circle before a port, which it serves to defend from the violence of the waves, thus protecting ships in harbor; also, sometimes the harbor itself.

Molino del Rey. A range of massive stone buildings, about 500 yards long, forming the western side of an inclosure which surrounds the rock and castle, groves and fields of Chapultepec, 2 miles southwest of the city of Mexico. These buildings were occupied by the troops of Santa Anna in September, 1847, to intercept the march of the American army under command of Gen. Scott upon the city of Mexico. They were attacked on the morning of the 8th by Gen. Worth's division, and, after a severe contest, the buildings were captured, with a loss to the Americans of 787 killed and wounded (including 59 officers), out of 8147, the whole

number engaged. The Mexican forces numbered about 10,000 men.

Mollwitz. A village of Prussian Silesia; to the east of it lies the celebrated battlefield where Frederick II. of Prussia gained his first victory over the Austrians, April 10, 1741.

Moluccas, or Spice Islands. A numerous group of islands in the Asiatic Archipelago, situated between Celebes on the west, and New Guinea on the east, and stretching from lat. 2° N. to lat. 9° S. They were discovered by the Portuguese about 1510; became dependencies of Holland, 1795; during the French war of 1796, however, they were taken by the British, who held possession of them till 1800, when they were returned to Holland. The islands were again occupied by the British in 1810, but were finally restored to the Dutch in 1814, by the treaty of Paris.

Molycrium. A town in the most southerly part of Ætolia; it was founded by the Corinthians, but was afterwards taken possession of by the Ætolians.

Mombas. A seaport town of Africa, on a small island, in a bay on the coast of Zanzibar. It was first visited by the Portuguese under Vasco de Gama in 1498. In 1505, Francisco de Almeida, the Portuguese viceroy of India, took and burnt the town; in 1529 the Portuguese returned and repeated their work of destruction, and retained the city from that date to 1720, when Mombas fell into the hands of the imam of Muscat, but he was soon dispossessed by a rebellion of the inhabitants. It was under British protection from 1824 to 1826, and is now governed by an Arab sheikh.

Momentum. Is that force possessed by a body in motion; and is measured by the product of the mass of the body into its velocity.

Mona (now Anglesey). An island off the coast of the Ordovices, in Britain; it was invaded by Suetonius Paulinus, 61, and was conquered by Agricola, 78.

Moncontour. A town near Poitiers, in France. Here Admiral Coligny and the French Protestants were defeated by the Duke of Anjou, October 3, 1569.

Mondovi. A town of Northern Italy, near the river Ellero, about 47 miles south from Turin. The town is defended by walls and a small citadel, and contains a great number of religious houses. The French, under Napoleon I., defeated the Sardinian troops, under Colli, near this town in 1796, and in 1799 the town was sacked by the French under Soult.

Monghir. A town of Hindostan, East Indies, situated on the southern bank of the Ganges. It was an object of contention between the kings of Behar and Bengal in the early part of the 16th century; taken by the British in 1763.

Mongolia. A vast district in Asia. Its present boundaries east and north are Manchuria and Siberia, respectively, and on the

south and west Thibet and Turkestan; but these boundaries have varied greatly at different periods of history. The whole of what is now usually recognized as Mongolia is considered to belong to the Chinese empire. See TARTARY.

Mongols. See TARTARY.

Monmouth, Battle of. Was fought June 28, 1778, between the Revolutionary forces under Gen. Washington and the British under Sir Henry Clinton. Gen. Washington, whose army of about 12,000 men was encamped at Valley Forge, being informed of the intention of the enemy to evacuate Philadelphia and proceed to New York, placed his forces in a condition to march immediately in pursuit. Accordingly, when intelligence of the evacuation reached him, he broke up his encampment, and detaching a small force under Gen. Arnold to take possession of Philadelphia, marched rapidly with his whole army toward the Delaware. On the morning of June 28 the advance of the Colonial army, under Gen. Lee, became engaged with the enemy's rear on the plain near Monmouth Court-house, in New Jersey; but the English line being soon reinforced, the Americans were compelled to give way, upon which Lee ordered a retreat. Gen. Washington, who was riding ahead of the main body of his army, met the retreating force, and peremptorily ordered Lee to reform his troops and hold his position. This he for a time partially effected, but was being again driven back, when the main body of the army arrived to his assistance. The battle now became general, and under the inspiring influence of their commander-in-chief the Americans fought with such desperate resolution that the British were at length obliged to give way. Washington made preparations to follow up his advantage, but owing to the broken character of the ground, and twilight coming on before a proper disposition of his troops could be made, the attack was postponed until next morning. When morning dawned, however, it was found that Sir Henry Clinton with his whole force had retreated during the darkness of the night toward Sandy Hook, and Washington, on account of the heat of the weather and the fatigue of his men, did not pursue them. This was one of the most severely contested battles of the war. The American loss was 227 killed and wounded, the English was a little greater.

Monomachy (Fr. *monomachie*). A single combat, or the fighting of two, hand to hand. It is derived from the Greek. A duel may properly be called a monomachy.

Mons (Flemish, *Berghen*). A strongly-fortified town of Belgium, in the province of Hainault, on the Trouille, 88 miles southwest from Brussels. It has been frequently besieged and taken; in 1709 it was taken by the allies under Marlborough and Eugène; in 1746 by Marshal Saxe; and in the wars of the French revolution in 1792-94 it was taken alternately by the French and the

allies, the former of whom held the town from 1784 to 1814.

Monsoon. A wind blowing half the year in one direction, and the other half in the opposite;—a term applied particularly to certain winds of the Indian Ocean, which blow from the southwest from April to October, and from the northeast the rest of the year. The term is sometimes used to designate similar winds in other parts of the globe.

Mont St. Jean. A village of Belgium; it is near the scene of the battle of Waterloo, called by the French the battle of Mont St. Jean.

Montana Territory. A Territory of the United States, which is bounded on the north by the British possessions, east by Dakota, south by Wyoming and Idaho, and west by Idaho. This Territory has been overrun by hostile Indians, who, under the management of the military, are being rapidly subjugated. It was formed into a separate Territory in May, 1864, before which time it formed part of Idaho.

Montauban. A town of France, capital of the department of Tarn-et-Garonne, 842 miles south by west from Paris. At the Reformation the people embraced the Protestant cause; and the town was ineffectually besieged by the adverse party in 1580. It afterwards, in 1621, resisted for three months the assaults of Louis XIII., and did not yield till after the fall of Rochelle in 1629. The fortifications were soon after destroyed.

Montbéliard, or Montbéliard. A town of France, in the department of Doubs, 48 miles northeast from Besançon. It was in former times a place of some strength, and the capital of a county that originally formed part of the kingdom of Burgundy, but was transferred to the Würtemberg family in 1895. Although twice taken by the French in the 17th century, it was not finally ceded to them till 1796.

Monte Aperto, Battle of. See SIENA.

Monte-Baldo. A mountain of Lombardy; the Austrians were defeated in its vicinity by the French in 1797.

Montebello Casteggio. A village of Northern Italy, in the province of Voghera; here the Austrians were defeated by a French army under Gen. Lannes, after a desperate conflict, June 9, 1800; in the last Italian war the Austrians were again defeated here by the united armies of the French and Piedmontese in May, 1859.

Montemaggiore Belsito. A town of the island of Sicily, 81 miles southeast of Palermo. It was occupied by the Saracens when they first took possession of the country.

Montenegro. A principality of Europe, situated between the Turkish eyalets of Bosnia and Albania, and separated from the Adriatic by the narrow strip of land known as the circle of Cattaro, in Austrian Dalmatia. The Montenegrins are Slavs of the Servian race, knit together in clans and

families, and have many fights among themselves, which are perpetuated by the hereditary obligation of avenging blood. Montenegro belonged in the Middle Ages to the great Servian kingdom, but after the dismemberment of the latter, and its conquest by the Turks at the battle of Kossovo (1889), the Montenegrins, under their prince, who was of the royal blood of Servia, maintained their independence, though compelled to relinquish the level tracts of land, and confine themselves to the mountains, in 1485. The Turks continued to assert their claims to Montenegro, but they were only defeated in their plans, and in 1710 the Montenegrins sought and obtained the protection of Russia, the czar agreeing to grant an annual subsidy on condition of their harassing the Turks by inroads. In 1860 the Montenegrins excited an insurrection against the Turkish rule in Herzegovina, which was soon suppressed, and in return they themselves were so hard pressed by the Turks that they were glad to agree to a treaty (September 8, 1862) by which the sovereignty of the Porte over Montenegro was recognized.

Montenotte. A small village of Northern Italy; here the Austrians were defeated by the French under Bonaparte, April 12, 1796.

Monter (Fr.). This word means to rise from one rank to another in the way of promotion, as from lieutenant to captain, etc., or from having the command of the youngest company to be promoted to that of the oldest.

Montereau. A town of France, in the department of Seine-et-Marne. In its immediate vicinity Napoleon, on February 18, 1814, gained his last victory over the allies.

Monterey. A city of Mexico, capital of the state of Nuevo Leon, about 85 miles east by north of Saltillo. Gen. Taylor with an army of about 6000 men, the first division under Gen. Worth, appeared before this place, September 21, 1846. It was defended by a force of about 10,000 Mexicans under Gen. Ampudia. In approaching the city the first obstacles to be overcome were two batteries, which were in a commanding position. These were soon taken and their guns turned on a third battery erected in a large stone building, called the Bishop's Palace. This was stormed on the morning of the 22d, and a vigorous sortie of the garrison having been repulsed, the Americans entered the city with the flying Mexicans. During the day a feigned attack on the defenses in front was soon converted into a real one, and after a severe contest the Americans entered the city, though with great sacrifice of life; for every street was barricaded, and guns were pointed from almost every wall. On the morning of the 23d, the defenses on the opposite side were assaulted and carried by the division of Gen. Worth, and the garrison soon after surrendered.

Monterey. A port of entry and capital

of the county of the same name in California, about 95 miles south-southeast of San Francisco. It was once a populous and thriving city, but has greatly declined since the rise of San Francisco. Being led to suppose that war existed between the United States and Mexico, Commodore Sloat took this place July 7, 1846, and raised the American flag without opposition.

Montero. A military cap and hood formerly worn in camp.

Monterotondo. A town of Central Italy, situated about 26 miles south-southwest of Rieti. An engagement took place here October 25, 1867, between the French and pontifical troops and the volunteers of Garibaldi, in which the latter were victorious.

Montevideo. The capital of the republic of Uruguay, in South America. It was taken by the British forces under Sir Samuel Auchmuty, February 8, 1807, but was evacuated by them July 7 of the same year, in consequence of the severe repulse the British met with at Buenos Ayres (which see). Montevideo was given up to Uruguay in 1828.

Montgomery. The capital of the State of Alabama. A convention of delegates from the Southern States met here February 4, 1861, to organize a provisional government for the seceded States, which were thereafter to be known as the Confederate States of America, and Montgomery was chosen as the seat of government. Richmond being afterwards made the capital of the Confederacy, the seat of government was transferred thither on May 20 in the same year.

Montiel (Spain), Battle of. Took place on March 14, 1369, between Peter the Cruel, king of Castile, and his brother, Henry of Transtamare, aided by the French warrior, Bertrand du Guesclin. Peter was totally defeated, and afterwards treacherously slain.

Montilla. A town of Spain, in Andalusia; in 1508 the fortifications of this place were destroyed by Ferdinand the Catholic.

Monlhery (Seine-et-Oise, France). The site of an indecisive battle between Louis XI. and a party of his nobles, termed "The League of the Public Good," July 16, 1465.

Montmartre. A village of France immediately to the north of Paris, and standing within the new line of fortifications; it was the scene of some sharp fighting in March, 1814.

Montmirail. A town of France, in the department of the Marne; Bonaparte defeated the Russians near this place in 1814.

Montmorency, or Montmorenci. The name of a noble French family, whose celebrity dates as far back as the 11th century, and which has produced many famous princes, peers, and generals. Among them were 6 constables and 11 marshals of France.

Mont-Pagnote (Fr.). In fortification, an eminence where persons post themselves out of the reach of cannon, to see a camp, siege, battle, etc., without being exposed to danger. It is also called the post of the invulnerables.

Montreal. The largest city of the Dominion of Canada and of British America; it was surrendered to the English by the French, September 8, 1760; taken by the Americans, November 12, 1776, and retaken by the English, June 16, 1778.

Montserrat. A West India island, discovered by Columbus in 1498; it has several times been taken by the French, but was secured to the British in 1788.

Moodkee. A small town of Hindostan; it is only remarkable for a victory gained by the British over a greatly more numerous force of the Sikhs on December 18, 1845.

Mook. A village of Holland, in the province of Limburg; Louis of Nassau was defeated by the Spaniards near this place in 1574, and was slain in the action.

Mooltan, or Moultan. A city of India, in the Punjab; this place was stormed by Runjeet Sing, 1818; it was taken by the British after a protracted siege, in January, 1849.

Moon. A crescent-formed outwork. See HALF-MOON.

Moors. Formerly the natives of Mauritania (which see), but afterwards the name given to the Numidians and others, and now applied to the natives of Morocco and the neighborhood. They assisted Genseric and the Vandals in the invasion of Africa, 429, and frequently rebelled against the Roman emperors. They resisted for a time the progress of the Arab Mohammedans, but were overcome in 707, and in 1019 by them introduced into Spain, where their arms were long victorious. In 1068 they were defeated in Sicily by Robert Guiscard. The Moorish kingdom of Granada was set up in 1237, and lasted till 1492, when it fell before Ferdinand V. of Castile. The expulsion of the Moors from Spain was decreed by Charles V., but not fully carried into effect till 1609, when the bigotry of Philip III. inflicted this great injury on his country. About 1518 the Moors established the piratical states of Algiers and Tunis. In the history of Spain the Arabs and Moors must not be confounded.

Mootiana. In the East Indies, the soldiers are so called, who are employed to collect the revenue.

Moppat. An early name for a sponge of a cannon.

Moquis. A body of Pueblo Indians, in Arizona, numbering about 1700, inhabiting seven villages in the region southwest of the Navajoes. Their towns would be almost impregnable to an Indian assault. Each pueblo is built around a rectangular court, and is surrounded by a wall 16 feet high, the top of which forms a landing, upon which the doors of the houses open. The exterior walls, which are of stone, have no openings, and would have to be scaled or battered down before access could be gained to the interior. The successive stories are set back, one behind the other. The lower rooms are reached through trap-doors from

the first landing; the latter is reached by means of detached ladders. The houses are three rooms deep, and open from the interior court; the arrangement is as strong and compact as could be well devised; but as the court is common, and the landings are separated by no partitions, it involves a certain community of residence.

Morat. An old town of Switzerland, situated on a lake of the same name, in the canton of Friburg. Charles the Bold of Burgundy was defeated before Morat by the Swiss in 1476.

Moravia. An Austrian province, occupied by the Slavonians about 458, and conquered by the Avars and Bohemians who submitted to Charlemagne. About 1000 it was subdued by Boleslas, king of Poland, but recovered by Ulric of Bohemia in 1080. After various changes, Moravia and Bohemia were amalgamated into the Austrian dominions in 1526. Moravia was invaded by the Prussians in 1866.

Morea. The name borne by the ancient Peloponnesus since the Middle Ages, if not from as early a period as the 4th century; it forms the most southern part of Greece. Morea was overrun by the Goths and Vandals, and became a prey in the second half of the 8th century to bands of Slavic invaders, who found it wasted by war and pestilence. Gradually, however, these barbarians were subdued and Grecianized by the Byzantine emperors. In 1207 Morea was conquered by French knights; part of the country was reconquered in 1261 by the Byzantine emperor Michael VIII. Palæologus; but in 1460 the greater part of the Morea fell into the hands of the Turks, who retained possession of it down to the period of the Greek revolution, except from 1687 to 1715, when it was held by the Venetians.

Morella. A strongly-fortified town of Spain, province of Castellon-de-la-Plana. It was taken by Philip V. in 1707, surprised in 1838 by Cabrera, and retaken, after a brave defense, by Espartero in 1840. During the last civil war, the walls and magazines of the citadel were destroyed.

Morgarten. A mountain of Switzerland, 5 miles north from Schwyz, where, in November, 1315, the first battle was fought for Swiss independence. On this occasion 20,000 of the Austrian forces were defeated by 1300 Swiss. In 1798 the French were also defeated here by the Swiss.

Morglay. A deadly weapon; a great sword.

Morion. An iron or steel head-piece worn by a man-at-arms in the days when armor was used. It was distinguished from the helmets of the knights and esquires in having neither visor nor beaver. Under the Norman laws, every yeoman between certain ages was bound to keep his morion ready for service.

Mormons. A modern sect who profess the religious doctrines of one Joseph Smith. Polygamy is one of the prominent features

of their religion. The sect has its headquarters at Salt Lake City, Utah.

Morne. The head of the lance used in tilting or other peaceful encounters. It was curved so that an adversary might be unhorsed, but not wounded, by a stroke.

Morning Gun. The gun fired at the first note of reveille in military barracks, forts, etc.

Morning Star. A weapon consisting of a ball with projecting spikes attached by a chain to a short staff. Used as late as the time of Henry VIII. by the train-bands of London.

Morocco. An empire in Northern Africa, formerly Mauritania. In 1051 it was subdued for the Fatimite caliphs, by the Almoravides, who eventually extended their dominion into Spain. They were succeeded by the Almohades (1121), the Merinides (1270), and in 1516 by the Scherifs, pretended descendants of Mohammed, the now reigning dynasty. The Moors have had frequent wars with the French, Spaniards, and Portuguese, due to piracy.

Moron, or Moron-de-la-Frontera. A town of Andalusia, Spain, about 32 miles northeast of Seville. On a hill east of the town are the ruins of an ancient castle erected by the Moors, which was one of the most important strongholds in Spain for several centuries. It was blown up by the French in 1812.

Morris Island. A low sand island, about 5 miles long, on the south side of Charleston harbor, S. C. A Confederate battery erected on its northern extremity aided in the capture of Fort Sumter, April 12-13, 1861, after which Fort Wagner and other batteries were erected for the defense of Charleston. An expedition against the city having been contemplated, the military occupation of the island by the Federals, and the erection of land-batteries for the reduction of Fort Sumter were deemed necessary. As the latter was a task requiring engineering skill, the duty was assigned to Gen. Q. A. Gillmore, who took command of the department. He took possession of the south end of the island on July 10, 1863, and on the 11th and 18th made two attempts to capture Fort Wagner near the north end by assault, his object being to get within more effective breaching distance of Fort Sumter. His efforts, however, were unsuccessful, and it was accordingly determined to reduce Fort Wagner by a regular siege. Gen. Gillmore commenced by the erection of parallels, which he pushed forward with such diligence in spite of all difficulties, that by August 18 his works were within about 400 yards of Wagner. On the morning of the 17th, having completed his batteries, which numbered about 60 pieces, and obtained the range, his guns opened fire on Sumter. The fleet, consisting of the frigate "Iron-sides" and the monitors, aided by some wooden gunboats, made an attack at the same time upon Fort Wagner and Fort

Gregg, another Confederate work, both of which were nearly silenced. On August 26, having completed a parallel and sap which extended very close to Fort Wagner, Gen. Gillmore determined to possess a ridge of sand which interposed, and was necessary to the success of his operations. It was constantly occupied by a strong body of the enemy's pickets and at night by a force protected by rifle-pits. A bombardment of the position was made just before dark, after which it was carried by the 24th Massachusetts, and one company of North Carolina troops captured. After a terrific bombardment of forty-two hours, September 5-8, it was determined to carry the place by storm on the next day, but during the night the enemy evacuated the fort, and Gen. Gillmore became master of the whole island.

Morris-pike. An ancient Moorish pike.

Mortar. Short cannon for throwing shells, usually fired at angles from 45° to 60° elevation, called "vertical fire," in contradistinction to the fire of long cannon, usually made at low angles. Mortars—so called from their similarity of form to the mortar for pulverizing, which has retained its familiar shape from the earliest ages—are believed to have been the first guns used, and, though changed from age to age frequently in form of chamber, size, and projectile, all ages have found them too useful in their special way to suppress or essentially alter them. The "Coehorn" mortar—so called from the famous Dutch engineer, Gen. Coehorn, who first proposed them in 1674—is to-day in use, of the same pattern and for the like service then suggested. Monster mortars have been constructed from time to time, in the hope of producing immense destruction in bombardments with single shells containing a large quantity of powder. The most recent of these, the monster mortar made by Mallet for the British government, weighing 114,000 pounds, with a bore of 36 inches and a shell of 2912 pounds, failed to be of any service. Perhaps the most unique mortars ever made were to be found in the island of Malta in the last century. The solid rock had been hollowed out into immense mortars, some of them 6 feet wide at the mouth. These tremendous *fougasses* (the proper term for them) were to be filled with stones, shells, and missiles of various kinds, to descend in a crushing shower upon an enemy attempting a landing. For different kinds of mortars now in use, see **ORDNANCE**.

Mortara. A walled town of Italy, situated on the right bank of the Arbogna, 14 miles south-southeast of Novara. In 774, the Lombards were here defeated by Charlemagne with great slaughter.

Mortar-bed. See **BEDS**, and **ORDNANCE**, **CARRIAGES FOR**.

Mortar-fuse. See **LABORATORY STORES**.

Mortar-piece. An old term for a mortar.

Mortar-scraper. See **IMPLEMENTS**.

Mortar-wagon. A wagon used to trans-

port mortars, mortar-beds, spare guns, and projectiles. See **ORDNANCE, CARRIAGES FOR.**

Mortfontaine. A village of France, in the department of the Oise, in the castle of which peace between France and the United States was signed in 1800.

Mortimer's Cross. Four cross-roads about 6 miles northwest from Leominster, in Herefordshire, England, where the Yorkists defeated the Lancastrians in 1461.

Mortlach. A parish of Scotland, in Banffshire. In this parish the Danes were defeated by Malcolm II. in the 11th century.

Mortne. See **MORNE.**

Moscow. A city of Russia in Europe, situated on the river Moskwa, 875 miles southeast from St. Petersburg. It was the ancient capital of Russia, and was founded about 1147. It was plundered by Timur, 1882; by the Tartars, 1451 and 1477; ravaged by Ladislav of Poland in 1611. It was entered by Napoleon I. and the French, September 14, 1812; the governor, Rostopchin, ordered it to be set on fire (11,840 houses burnt, besides palaces and churches), September 15, 1812. It was evacuated by the French in October, 1812.

Moskirch (Baden). Here the Austrians were defeated by Moreau and the French, May 5, 1800.

Moskwa, Battle of. See **BORODINO.**

Moslem. Pertaining to the Mohammedans.

Moss-troopers. A name formerly applied to the raiders and cattle-thieves who infested the borders of England and Scotland.

Mothir al Moolk. In the East Indies, fortifications, barricades, intrenchments, or breastworks, are so called.

Motion. Each movement in the manual of arms is divided into motions to facilitate instruction of recruits.

Motion of Projectiles. See **PROJECTILES.**

Moton. In ancient armor, a small plate covering the armpits of a knight, used when plate-armor was worn.

Motto. In heraldry, is a word or short sentence which forms an accompaniment to a coat of arms, crest, or household badge. In modern heraldry it is customary to place the motto in an escrol either above the crest or below the shield.

Motya. An ancient town in the northwest of Sicily, situated on a small island (now *Isola di Mezzo*), only 8 stadia from the coast. It passed from Sicily into the hands of the Carthaginians; was taken from them by Dionysius of Syracuse about 397 B.C., and was finally captured by the Carthaginian general Himilco, who transplanted all its inhabitants to the town of Lilybæum. From this time it disappears from history.

Moulinet. A circular swing of the weapon in sword exercise.

Moultrie, Fort. See **FORT MOULTRIE.**

Mound. A bulwark for offense or defense.

Mound. In heraldry, a representation of a globe, surmounted with a cross (generally)

pattée. As a device, it is said to have been used by the emperor Justinian, and to have been intended to represent the ascendancy of Christianity over the world. The royal crown of England is surmounted by a mound, which first appeared on the seal of William the Conqueror, though the globe without the cross was used earlier.

Mount. The means or opportunity for mounting, especially a horse; and the equipments necessary for a mounted horseman.

Mount. To place one's self on, as a horse or other animal, or anything that one bestrides or sits upon; to bestride. Hence, to put on horseback; to furnish with animals for riding; to furnish with horses. "To mount the Trojan troop." See **DISMOUNT.**

Mount. To put anything that sustains and fits, for use; as, to mount a gun on a carriage. To prepare for being worn or otherwise used, as a sword-blade by adding the hilt and scabbard. A ship or a fort is said to mount cannon when they are arranged for use in and about it.

Mount. A word of command in the cavalry exercise for the men to mount their horses.

Mount a Breach, To. To run up in a quick and determined manner to any breach made in a wall, etc. *To mount guard*, to do guard duty in a town, garrison, camp, etc.

Mount Desert Island. A mountainous island in the Atlantic, and in Hancock Co., Me.; is 14 miles long and 7 wide. The French settled it in 1608; they were driven out by the English in 1616. The English settled it in 1761.

Mountain Artillery. A species of light artillery which is used in the United States and other countries in mountain warfare. See **MOUNTAIN BATTERY.**

Mountain Battery. A battery of mountain pieces. The pieces and carriages are carried separately upon the backs of animals, by means of pack-saddles of special construction. These have, however, of late been almost entirely superseded for this purpose by the *aparejo*. A portable forge also accompanies each battery, and is carried with a bag of coal upon a pack-saddle.

Mountain-carriage. See **ORDNANCE, CARRIAGES FOR.**

Mountain-gun. See **MOUNTAIN ARTILLERY.**

Mountain-howitzer. The howitzer used in the U. S. service is a 12-pounder brass gun of old pattern with cylindrical chamber. The gun weighs 220 pounds and has an extreme length of 37.21 inches. This gun is ignored in the Light Artillery Tactics.

Mounted Troops. Cavalry.

Mounting Guard. See **GUARD MOUNTING.**

Mourne. That part of a lance or halbert to which the steel or blade is fixed.

Mouser. In the British army, a sobriquet which was sometimes used in sport to distinguish the battalion men from the flank companies. It was indeed generally applied

to them by the grenadiers and light bobs, meaning that while the latter are detached, the former remain in quarters, like cats to watch the mice, etc.

Mousquetaires, or Musketeers. A body of horse-soldiers under the old French *régime*, raised by Louis XIII. in 1622. This corps was considered a military school for the French nobility. It was disbanded in 1646, but was restored in 1657. A second company was created in 1660, and formed Cardinal Mazarin's guard.

Mouth. See MUZZLE.

Mouth. The outer opening of an embrasure.

Movement. A term used to express the changes of position which troops undergo in performing their evolutions.

Mow. To cut down with speed; to cut down indiscriminately, or in great numbers or quantity; to sweep away; as, a discharge of grape-shot mows down whole ranks of men.

Moyan. A species of early artillery.

Moyen (Fr.). The bastions which are constructed on the angles are called royal bastions. Some engineers have distinguished these bastions by the name of *moyens royaux*, or medium royals, whose flanks contain from 90 to 100 toises.

Moyenne (Fr.). An ancient 4-pounder, 10 feet long, weighing 1800 pounds. In the time of Charles IX. (1572) it was a 2½-pounder.

Moyenne Ville (Fr.). A term formerly given by the French to any town in which the garrison was equal to a third of the inhabitants, and which was not deemed sufficiently important to bear the expense of a citadel; more especially so because it was not in the power of the inhabitants to form seditious meetings without the knowledge of the soldiers who were quartered on them.

Moyens Côtés (Fr.). In fortification, are those sides which contain from 80 to 120 toises in extent. They are always fortified with bastions on their angles. The *moyens côtés* are generally found along the extent of irregular places, and each one of these is individually subdivided into small, mean, and great sides.

Mozyr. A town in the southeast of the government of Minsk, in European Russia, situated on the Pripet, a tributary of the Dnieper. It is a town of considerable antiquity, and played a rather important part in the wars between the various Russian princes previous to the Tartar invasion. It was unsuccessfully besieged by the Tartars in 1240.

Muff and Collar. See ORDNANCE, CARTRIDGES FOR LIMBER.

Muffle. To wrap with something that dulls or renders sound inaudible; to deaden the sound of; as, to muffle a drum.

Mufti. The civilian dress of a military officer when off duty; hence, a citizen's dress, as distinguished from military uniform.

Muhlagis. Turkish cavalry composed of expert horsemen, who generally attend the beglierbeys. They are not very numerous.

Muhlberg. A town of Prussian Saxony, situated on the Elbe. Here, on April 24, 1547, a battle was fought between Johann-Friedrich, elector of Saxony, and the emperor Charles V., a battle fraught with the most important results to the cause of Protestantism in Germany. The battle was soon decided in favor of the emperor; the elector was taken prisoner, and stripped of his territories. From this time till 1552, the Catholics were triumphant in Germany.

Muhldorf. In Bavaria, near which place Frederick, duke of Austria, was defeated and taken prisoner by Louis of Bavaria, September 28, 1322.

Mulct. A soldier is said to be mulcted of his pay when put under fine or stoppages for necessities, or to make good some dilapidations committed by him on the property of the people or the government.

Mule. See PACK AND DRAUGHT ANIMALS.

Mullet. In heraldry, is a charge in the form of a star, generally with five points, intended to represent a spur-rowel. It is a mark of cadency assigned to the third son.

Multan, or Mooltan. An ancient and important city of India, in the Punjab, 200 miles southwest from Lahore. Multan is a military station, with a small redoubt in the rear of the cantonment. In 1849 it was taken by the British troops under Gen. Whish, and annexed with its territory to the British possessions.

Multi-charge Gun. Many attempts have been made by inventors to utilize the accelerating effect on the projectile of several charges successively fired in a gun. *Lyman's multi-charge* gun has a series of pockets along the bore, the charges in which are successively fired as the projectile passes them. *Bessemer* proposed plan is to use a gun of great length. The charges are placed separately in holes at the breech, to be fired in succession by electricity.

Multiple Lines. In fortification, several lines of detached walls for the defense of a position.

Munchengratz. A town of Bohemia, on the Iser, 8 miles northeast from Jungbunzlau; it was taken by the Prussians under Prince Frederick Charles, after a severe action, June 28, 1866. The Austrians lost about 800 killed and 1000 prisoners, and the prince gained about 12 miles of country. There is a palace here, in which the emperors of Austria and Russia and the king of Prussia met in 1833.

Munda. A Roman colony and an important town in Hispania Bætica, situated on a small river, and celebrated on account of two battles fought in its neighborhood, the victory of Cn. Scipio over the Carthaginians in 216 B.C., and the important victory of Julius Cæsar over the sons of Pompey in 45.

Munich (Ger. *München*). The capital of the kingdom of Bavaria, situated on the Iser, 117 miles southeast from Stuttgart. It was taken by Gustavus Adolphus of Sweden in 1632; by the Austrians in 1704, 1741, and 1748; and by the French under Moreau, July 2, 1800.

Munifice (Lat. *munifex*), Fr. A Roman soldier who was subjected to every kind of drudgery-work in camp.

Munimell. A stronghold, fortification, etc.

Munition. Whatever materials are used in war for defense, or for annoying an enemy; ammunition; also, stores and provisions; military stores of all kinds.

Munkacs. A market-town of East Hungary, 80 miles northeast from Debreczin. It was taken by the Imperialists in 1687, after a siege of three years.

Munsees, or **Minsees**. A tribe of Indians of Algonkin stock, who were closely allied to the Delawares. Many of them became converts to Christianity. A few of them now reside on the reservation of the Stock-bridge Indians in Wisconsin, and about 60 are settled in Kansas.

Münster. A city of Germany, on the small river Aa, 77 miles northeast from Cologne. It is the capital of a government of the same name in Prussian Westphalia. It was seized by the French in 1806; part of the duchy of Berg, 1809; annexed to France, 1810; ceded to Prussia, 1815. It was the headquarters of the Anabaptists under John Leyden, who defended it against the bishop of Münster, 1584-85. Here was signed the treaty of Westphalia or Münster, October 24, 1648.

Münsterthal. Two valleys of Switzerland, one in the canton Grisons, the other in Berne, where, in 1444, the battle of St. Jacob was fought between the French and Swiss, when the latter were nearly annihilated.

Muotta Valley. A secluded valley of Switzerland, canton of Schwytz, traversed by the river Muotta, an affluent of Lake Lucerne. Here a sanguinary struggle took place in 1799, between the French under Lecourbe, Mortier, and Masséna, and the Russians under Suwarrow. The latter was hemmed in on all sides, but by a desperate onslaught he cut his way through the French lines, and made a masterly retreat.

Muradal, Battle of. See **TOLOSA**.

Murage. Money appropriated to the repair of military works; anciently so called.

Mural Crown. In Roman antiquity, a golden crown, or circlet of gold, indented so as to resemble a battlement; bestowed on him who first mounted the wall of a besieged place, and there lodged a standard.

Murcia. An old kingdom in the south-east of Spain, now divided into the modern provinces of Murcia and Albacete. It was conquered by the Arabs in 711 (712, 718); after the fall of the caliphate of Cordova, it became an independent Arab kingdom, but six years afterward was subjugated by King Ferdinand II. of Castile.

Murcia. A city of Spain, capital of the ancient kingdom and modern province of its own name, 80 miles north-northwest of Carthage. It was taken by the Moors in 718; wrested from them by Ferdinand of Castile. In 1810 it was taken and sacked by the French.

Murderer. A great piece of artillery. Among the ordnance given up to Monk with Edinburgh Castle in 1660 is mentioned "The great iron murderer, Muckle Meg."

Murdresses. In ancient fortification, a sort of battlement with interstices, raised on the tops of towers in order to fire through.

Muret (Southern France). Here the Albigenses under the Count of Toulouse were defeated by Simon de Montfort, and their ally, Peter of Aragon, killed, September 12, 1218.

Murfreesboro'. A town and capital of Rutherford Co., Tenn., about 80 miles southeast of Nashville. A Federal force which occupied this place in 1862 was surprised and captured by a body of Confederates under Gen. Forrest. Near here, on December 31, 1862, the Army of the Ohio under Gen. Rosecrans encountered the Confederates under Gen. Bragg, and a desperate battle ensued, continuing at intervals and with varying success until January 3, 1863, when the Confederate army retreated, and Gen. Rosecrans occupied Murfreesboro'. The Federal loss was about 8500 killed and wounded, and 3600 missing; the Confederates represented their loss at 10,000, of which 9000 were killed and wounded. This battle is known as the battle of Murfreesboro', or of Stone River.

Murviedro. A fortified town of Spain in the province of Valencia, 17 miles north from Valencia. It was taken by Hannibal 219 B.C.

Musculé, or **Testude**. In ancient times, a machine of war; a mantelet; shed; low, long, and sharp-roofed shed, which enabled the besiegers to advance to and sap the wall of the besieged.

Music. A general term for the musicians of a regimental band.

Music, Phrygian. A martial sort of ancient music, which excited men to rage and battle; by this mode Timotheus stirred up Alexander to arms.

Musicians. See **BAND**, **DRUMMER**, **FIFER**, and **TRUMPETER**.

Musket, or **Musquet** (Fr. *mousquet*). The fire-arm for infantry soldiers, which succeeded the clumsy arquebuse, and has itself given way before the rifle (which see). The first muskets were matchlocks; after which came wheel-locks, snaphans or snaphance muskets, and lastly percussion muskets, which were a vast improvement both for accuracy and lightness on all which had gone before. Compared, however, to the present rifle, the musket was a heavy, ugly, and ineffective weapon.

Musket Baskets. These are about a foot or a foot and a half high, 8 or 10 inches diameter at bottom, and a foot at the top, so that being filled with earth there is room to

lay a musket between them at the bottom, being set on low breastworks, or parapets, or upon such as are beaten down.

Musketeer. A soldier armed with a musket.

Musketoön. An obsolete weapon; was a short musket of very wide bore, carrying a ball of 5 ounces, and sometimes bell-mouthed like a blunderbuss. Also one who was armed with such a weapon.

Musket-proof. Capable of resisting the effects of musket-balls.

Musketry. Muskets in general or collectively. "The rattling of musketry."

Musselburgh. A royal burgh of Scotland, county of Mid-Lothian, at the mouth of the Esk, 6 miles east of Edinburgh. The town is historically important on account of the battle of Pinkie, which was fought in the neighborhood in 1547, when the Scottish army was defeated by the English under the Earl of Somerset.

Mustang. The wild horse of the prairies in Mexico, California, etc. It is small, hardy, and easily sustained.

Muster. A review of troops under arms, fully equipped, in order to take an account of their numbers, inspect their arms and accoutrements, and examine their condition. In the U. S. service troops are mustered bi-monthly. During the civil war, the mustering in and mustering out of troops (into or out of the U. S. service) were performed by staff-officers, called commissaries of musters.

Muster-book. A book in which military forces are registered.

Muster-file. A muster-roll.

Muster-master. One who takes an account of troops, and of their arms and other military apparatus. This title is not known in the U. S. army. The person who performs these duties is called a *mustering officer*, or an *inspecting officer*.

Muster-roll. A roll or register of the men in each company, troop, or regiment.

Muta (Syria). Here Mohammed and his followers defeated the Christians in his first conflict with them, 629.

Mutilated. In a military sense, signifies wounded in such a manner as to lose the use of a limb. A battalion is said to be mutilated when its divisions, etc., stand unequal.

Mutina. See MODENA.

Mutine. To mutiny; a mutineer. This term is obsolete.

Mutineer. One guilty of mutiny; a person in military or naval service, who rises in opposition to the authority of the officers, who openly resists the government of the army or navy, or attempts to destroy due subordination.

Mutinous. Disposed to mutiny or resist the authority of laws and regulations, especially in an army, or openly resisting such authority; turbulent; seditious.

Mutinously. In a mutinous manner.

Mutinousness. The quality or state of being mutinous; seditiousness.

Mutiny. Insurrection against constituted

authority, particularly military authority; open and violent resistance to the authority of officers; concerted revolt against the rules of discipline; hence, generally, forcible resistance to rightful authority on the part of subordinates. Violent commotion; tumult; uproar; strife.

Mutiny. To rise against lawful authority in the military service; to excite, or to be guilty of mutiny, or mutinous conduct; to revolt against one's superior officer or rightful authority.

Mutiny Act. In Great Britain, an annual act of Parliament fixing the strength of the army for the military year, which commences April 1, and ends March 31, and imposing certain penalties for offenses connected with the army. It also authorizes the sovereign to issue Articles of War.

Muzzle. See ORDNANCE, NOMENCLATURE.

Muzzle Velocity. Velocity at the muzzle. See INITIAL VELOCITY.

Muzzle-ring. The metallic ring or circle that surrounds the mouth of a cannon or other piece.

Muzzle-sight. A front sight placed on or near the muzzle.

Mycalæ (now Samsum). A mountain in the south of Ionia, in Asia Minor, north of the mouth of the Meander. It forms the western extremity of Mount Messogis, and runs far out into the sea, opposite to Samos, forming a sharp promontory, which was called Mycalæ, or Troglilium (now *Cape St. Maria*). This cape and the southeast promontory of Samos (Posidonium) overlap one another, and the two tongues of land are separated by a strait only about three-fourths of a mile in width, which is renowned in Greek history as the scene of the victory gained over the Persian fleet by Leotychides and Xanthippus, 479 B.C.

Mycalæssus. An ancient and important city in Boeotia, mentioned by Homer, situated on the road from Aulis to Thebes. In 418 B.C., some Thracian mercenaries in the pay of Athens surprised and sacked the town and butchered the inhabitants. From this blow it never recovered, and was in ruins in the time of Pausanias.

Mycenæ, sometimes Mycenæ (now Karvata). An ancient town in Argolis, about 6 miles northeast of Argos; it is said to have been founded by Perseus in 2 B.C. After the conquest of Peloponnesus by the Dorians, it ceased to be a place of importance. It still, however, continued an independent town till 468 B.C., when it was attacked by the Argives, whose hatred the Mycenæans are said to have incurred by the part they took in the Persian war in favor of the Greek cause. The massive walls of Mycenæ resisted all the attacks of the Argives; but the inhabitants were at length compelled by famine to abandon their town. They effected their escape and took refuge, some at Cleonæ, some in Achaia, and others in Macedonia.

Mylæ. See MILAZZO.

Myonnesus (now *Cape Hypsil*). A promontory of Ionia, with a town and a little island of the same name, forming the northern headland of the Gulf of Ephesus. Here the Romans, under the prætor L. Æmilius, gained a great naval victory over Antiochus the Great, 190 B.C.

Myriarch. A captain or commander of 10,000 men.

Myrmidons. The soldiers who accompanied Achilles in the expedition against Troy. Rough, desperate characters banded under a leader.

Mysore, Maheshasoor, or Maisur. A raj or native principality of Southern India. It was ruled by Hyder Ali, who acquired the sovereignty in 1761, and afterwards by his son Tippoo Sahib, who was slain when Seringapatam (May 4, 1799) was stormed and taken, and the country occupied by the British, who set up, in the same year, an heir of the ancient Hindoo royal family of Mysore to rule in his stead. The state is now subsidiary to the British.

Mytilene, Mitylene, or Metelin. The city of Lesbos. At the beginning of the 7th century B.C., the possession of its colony, Sigæum, at the mouth of the Hellespont, was disputed in war between the Mytileneans and Athenians, and assigned to the latter by the award of Periander, tyrant of Corinth. Mytilene submitted to the Persians after the conquest of Ionia and Æolis, and furnished contingents to the expeditions of Cambyzes against Egypt and of Darius against Scythia; it was active in the Ionian revolt; became again subject to Persia, and took part in the expedition of Xerxes against Greece. After the Persian war it formed an alliance with Athens, and remained one of the most important members of the Athenian confederacy. In 428 B.C. it headed a revolt of the greater part of Lesbos, the progress and suppression of which forms one of the most interesting episodes in the history of the Peloponnesian war. Mytilene fell under the power of the Romans after the Mithridatic war.

N.

Naas. A town of Ireland, in the county of Kildare, 18 miles southwest from Dublin. Here the insurgent Irish were defeated by a body of the king's forces, May 24, 1798; the insurgents lost about 800 killed and many wounded.

Nabataei, or Nabathæ (in the Old Testament *Nebaioth*). An Arabian people, descended from the eldest son of Ishmaël, had their original abodes in the northwestern part of the Arabian peninsula, east and southeast of the Moabites and Edomites. After the Babylonian conquest of Judæa, the Nabathæans extended west into the Sinaitic peninsula and the territory of the Edomites. They resisted all the attacks of the Greek kings of Syria. Under Augustus the Nabathæans are found, as nominal subjects of the Roman empire, assisting Ælius Gallius in his expedition into Arabia Felix; under Trajan they were conquered by A. Cornelius Palma, and Arabia Petrea became a Roman province, 105-107. The Mohammedan conquest finally overthrew the power of the Nabathæans.

Nachod. A town of Bohemia, near where the Prussians, under their crown prince, defeated the Austrians after a severe conflict, June 27, 1866. In this battle, the superiority of the Prussian Uhlans over the Austrian cavalry was demonstrated.

Nafels. A small town of Switzerland, in the canton of Glarus, 4 miles north from

Glarus. Here in 1388, 1500 men of Glarus, under Matthias am Buhl, overthrew an Austrian force of from 6000 to 8000 men. The event is still celebrated yearly.

Nagarkana. In the East Indies, the place where all the drums and war-music are kept, is so called.

Naggur (Ind.). The principal drum in Asiatic armies, commonly allowed only to persons of high dignity; the bass drum.

Nagpore, Nagpur, or Nagpoor. A city of British India, capital of the province of the same name, 480 miles in a direct line east-northeast from Bombay. The rajahs of Nagpore, now an extinct dynasty, were the rulers of a state which was a branch of the great Mahratta confederacy. Its founder was Parsojee, originally a private soldier. Ragojee, one of the successors of Parsojee, united his forces in 1803 with those of Scindia in the war against the British consequent on the treaty of Bassein. The victories of Assaye and Argaum compelled him to sue for peace, and by a treaty concluded in 1804, he surrendered the province of Cuttack. Appa Sahib, his successor, concluded a treaty with the British government, but on November 26, 1817, he made an attack on the British troops at Seetabuldee, an eminence on the outskirts of the town of Nagpore. The British force only 1400 strong, under Col. Scott, was opposed to a body of 20,000 native troops;

but the best dispositions which the suddenness of the attack allowed were promptly made. A noble charge, headed by Capt. Fitzgerald with a small party of cavalry, upon a large body of the enemy's horse, decided the fortune of the day, which ended in the defeat of the natives.

Naigue, Naick, or Naik. A native non-commissioned officer among Indian and Anglo-Asiatic troops, whose functions are somewhat analogous to those performed among European troops by the drill-sergeant.

Nail Cannon, To. See SPIKE CANNON, To.

Nail-ball. A round projectile with an iron pin protruding from it, to prevent its turning in the bore of the piece.

Nairs. A native military tribe of the Malabar coast. They affirm that they are the oldest nobility in the world. Their pride on this supposition is greater than that of the Rajpoots. In 1755, the king of Travancore, with the assistance of a French officer called Launoy, disciplined 10,000 Nairs in the method of European infantry.

Najera. A town of Spain in the province of Logrono. Near this place Edward the Black Prince defeated Henry de Trastamere, and re-established Peter the Cruel on the throne of Castile, April 8, 1367.

Naked Bullet. *Grooved or cannelured bullet* as distinguished from the *patched bullet*.

Namur. A city of Belgium, capital of the province of the same name, 33 miles southwest from Liège. It has been fortified from the earliest period of its history; in 1692 its defensive works were repaired and strengthened by Coehorn; was taken in the following year by Louis XIV. and Vauban, the latter of whom added considerable to its original strength; in 1695 it sustained a long siege against William III. of England, and was taken; seized by the French in the beginning of the 18th century, but ceded to Austria in 1713. In 1781 the emperor Joseph expelled the Dutch garrison. In 1792 it was occupied by the French, but retaken by the Austrians in 1793. In 1794 it was again occupied by the French, who kept it till the Netherlands were given up by the French government in 1814; and after having been gallantly defended by its French conquerors in 1815, against the Prussians under Pirch, it was finally restored to the Netherlands after the battle of Waterloo, and at once put into thorough repair. The works were demolished again in 1866 with the exception of the citadel.

Nana. In the East Indies, the title which is given to a chief of the Mahrattas. It more properly signifies the acting head of the government, and general of the forces.

Nancy. A city of France, the capital of the department of the Meurthe, situated on the Meurthe, 80 miles south from Metz; it was the capital of Lorraine and the residence of the dukes of that country in the 13th cen-

tury. After taking Nancy, November 29, 1475, and losing it, October 5, 1478, Charles the Bold of Burgundy was defeated and slain beneath its walls by René II., duke of Lorraine, and the Swiss, January 5, 1477. Nancy on the retreat of MacMahon's army, and expecting the German army, surrendered to four Uhlans, August 12, 1870.

Nankin, Nanking, Kianning-Foo, or Kiangning-Fu. The ancient capital of China, now the chief town of the province of Kiangsu, is situated about 8 miles from the south bank of the river Yang-tse-Kiang, about 100 miles from its mouth. On August 4, 1842, the British ships arrived at Nankin, and were kept before this place till the final treaty of August 29, between China and Great Britain, was signed and ratified. The rebel Tae-pings (Taipings) took it on March 19-20, 1853. It was recaptured by the imperialists, July 19, 1864.

Nantes (anc. *Condivicium*, afterwards *Namnetes*, or *Nannetes*). An important commercial town of France, capital of the department of Loire-Inférieure, on the right bank of the Loire, about 80 miles from its mouth, 208 miles southwest of Paris. The history of Nantes reaches back to the time of the Romans, in whose hands it seems to have remained until the beginning of the 5th century, when they were driven from the town. In 445 it valiantly withstood a siege of sixty days by the Huns. It was captured by the Normans in 853 and 859, and held in possession by them for nearly a century, after which the town suffered many sieges,—in 1343 by the English; in 1380 by the Earl of Buckingham, when it was relieved by Oliver of Clisson; and again in 1491 by Charles VIII. It suffered much from the Vendéan civil war of 1793. In June of that year the Vendéan army, 50,000 strong, under Cathelineau, laid siege to the city, then defended by Gens. Beysser and Canclaux, but were repulsed with great loss,—their general being among the slain. Here took place the wholesale drowning (termed *Noyades*) of the royalists in the Loire, by command of the brutal Carrier, one of the leaders of the republicans, November, 1793. It was from Nantes that Prince Charles Edward embarked for Scotland in 1745.

Nantes, Edict of. The name given to the famous decree published in that city by Henry IV. of France, April 13, 1598, which secured to the Protestant portion of his subjects freedom of religion.

Naples. A province of Italy, occupying the southern part of the Italian peninsula, formerly the continental division of the old kingdom of the Two Sicilies. It began with a Greek colony named Parthenope (about 1000 B.C.), which was afterwards divided into Palæopolis (the *old*) and Neapolis (the *new city*), from which latter the present name is derived. The colony was conquered by the Romans in the Samnite war, 326 B.C. Naples, after resisting the power of

the Lombards, Franks, and Germans, was subjugated by the Normans, under Roger Guiscard, king of Sicily, in 1181. Naples was conquered by Theodoric the Goth in 498; retaken by Belisarius in 536; taken again by Totila in 543; retaken by Narses in 542; conquered, and the kingdom of the Two Sicilies founded by Roger Guiscard II. in 1181. Here occurred the massacre called the Sicilian Vespers (which see), March 30, 1282. The territory was invaded by Louis, king of Hungary, in 1349; seized by Alphonso V. of Aragon in 1435; conquered by Charles VIII. of France in 1494; and by Louis XII. of France and Ferdinand of Spain, who divided it in 1501. The French were expelled from Naples in 1504; insurrection of Masaniello, occasioned by the extortions of the Spanish viceroys, July, 1647; Masaniello slain by his own followers a few days later; another insurrection suppressed by Don John of Austria, October, 1647. Naples was conquered by Prince Eugène of Savoy for the emperor in 1706; the king flies on the approach of the French republicans, who establish the Parthenopean republic, January 14, 1799; Nelson appears; Naples retaken June, 1799; the Neapolitans occupy Rome, September 30, 1799. Ferdinand is compelled to fly to Sicily, January 23, 1806; the French enter Naples, and Joseph Bonaparte made king, February, 1806; Joachim Murat made king, July 15, 1806; Joachim declares war against Austria, March 15, 1815; defeated at Tolentino, May 8, 1815; successful insurrection of the Carbonari under Gen. Pèpé, July 13, 1820; the Austrians invade the kingdom; Gen. Pèpé defeated, March 7, 1821; insurrection of the Carbonari suppressed, August, 1828; great fighting in Naples; the liberals and the national guard almost annihilated by the royal troops, aided by the *lazzaroni*, May 15, 1848; a martial anarchy prevails, 1849; Italian refugees, under Count Pisacane, land in Calabria, are defeated, and their leader killed, June 27–July 2, 1857; insubordination among the Swiss troops at Naples, many shot, July 7, 1859; Garibaldi lands in Sicily, May 11, 1860, and defeats the Neapolitan army at Calatafimi, May 15, 1860; state of siege proclaimed at Naples, June 28, 1860; Garibaldi defeats Neapolitans at Melazzo, July 20; enters Messina, July 21, and the Neapolitans agree to evacuate Sicily, July 30, 1860; the army proclaim Count de Trani king, July 10, 1860; Garibaldi lands at Melito, August 18, 1860; takes Reggio, August 21, 1860; he enters Naples without troops, September 7, 1860; Garibaldi gives up the Neapolitan fleet to the Sardinian admiral Persano, September 11, 1860; repulses the Neapolitans at Cajazzo, September 19, 1860, and defeats them at the Volturno, October 1, 1860; the king of Sardinia enters the kingdom of Naples, and takes command of his army, which combines with Garibaldi's, October 11, 1860; Cialdini defeats the Neapolitans at Isernia,

October 17, and at Venafrò, October 18, 1860; Garibaldi meets Victor Emmanuel, and salutes him as king of Italy, October 26, 1860.

Naples (Lat. *Neapolis*, It. *Napoli*). A city of Italy, the capital of the province of Naples, situated on the Bay of Naples, near the foot of Mount Vesuvius. In 1799 it was taken by the French, who evacuated it shortly after, but again occupied it in 1806. In 1848 it was plundered by the *lazzaroni*, of whom 1500 lost their lives. The history of this city is nearly identical with that of the province of the same name (which see).

Napoleon Gun. In 1856 it was proposed to increase the power of the light, and diminish the weight of the heavy field artillery, by the introduction of a single piece of medium weight and caliber; such is the new field or Napoleon gun. It has no chamber, and should therefore be classed as a gun. Its exterior is characterized by the entire absence of molding and ornament, and in this respect may be at once distinguished from the old field-cannon. The first reinforce is cylindrical, and it has no second reinforce, as the exterior tapers uniformly with the chase from the extremity of the first reinforce. The size of the trunnions and the distance between the rimbases are the same as in the 24-pounder howitzer, in order that pieces may be transported on the same kind of carriage. The diameter of the bore is that of a 12-pounder, the length of bore is 16 calibers. The weight is 100 times the projectile, or 1200 pounds. The charge of powder is the same as for the heavy 12-pounders (pattern of 1840), or 2½ pounds for solid and case-shot, and 2 pounds for canister-shot. It has, therefore, nearly as great range and accuracy as the heaviest gun of the old system, and, at the same time, the recoil and strain on the carriage are not too severe. The new gun and carriage weigh about 500 pounds more than the 6-pounder and carriage, still it has been found to possess sufficient mobility for the general purposes of light artillery. It is proposed to retain the 12-pounder howitzer in service, to be employed in cases where great celerity of movement is indispensable. The effect of this change is to simplify the *matériel* of field artillery, and to increase its ability to cope with the rifle-musket, principally by the use of larger and more powerful spherical case-shot. The principal objection to an increased caliber for light field-guns is the increased weight of the ammunition, and consequent reduction of the number of rounds that can be carried in the ammunition-chests.

Narbonne. A city of France, in the department of the Aude, 32 miles east of Carcassonne. The modern town of Narbonne occupies the site of the ancient *Narbo Martius*, a Roman colony founded in 118 B.C. After the first colonization of Narbo, many of the soldiers of Cæsar's Tenth Legion were settled here, from whom the town derived

the name of *Decumanorum Colonia*. It was taken by the Visigoths in 462, by the Burgundians in 508, by the Franks in 581, by the Saracens in 719, and by the Moors in 779. Charles Martel defeated the Moors under its walls, but the town held out until it was taken by Pepin in 759. In 859 it fell to the arms of the Northmen.

Nariaci. A small but brave people in the south of Germany, of the Suevic race, dwelt west of the Marcomanni and east of the Hermunduri. Their country extended from the Sudeti Montes on the north to the Danube on the south.

Narni (anc. *Narnia*). A town of Central Italy, on the Nera, or Nar, about 45 miles northeast of Rome. During the second Punic war an army was posted here to oppose the threatened advance of Hasdrubal upon Rome. The town bore an important part in the civil war between Vitellius and Vespasian. It was occupied by the generals of the former to check the advance of Vespasian's army, but the increasing disaffection towards Vitellius caused the troops at Narnia to lay down their arms without resistance. Its natural strength and commanding position rendered it also of great importance during the Gothic wars of Belisarius and Narses. The town was sacked by the Venetians and its garrison put to the sword in the 16th century, since which time it has been a place of little importance.

Narragansetts. A tribe of Algonkin Indians who formerly inhabited a tract of country nearly corresponding to the present State of Rhode Island. They were generally friendly to the early white settlers, and were sworn enemies of the Mohegans (which see). In 1687, when the Pequots were attempting to induce them to join in a general war upon the whites, they were dissuaded from doing so by Roger Williams, who had great influence with their chief, Canonchic. In King Philip's war (1675) they were suspected of playing false to the settlers, and of sheltering the enemy that wasted their settlements. It was accordingly resolved to treat them as enemies, and 1000 colonists marched against their chief fort, which was situated on a swamp island near what is now the village of Kingston, R. I. The fort was taken by storm and burned, all the winter supplies of the Indians and many of the aged and helpless, it is said, perishing in the flames. Hunger and distress followed; but the Narragansetts still maintained the contest under their chief, Canonchet, until he was taken prisoner and put to death. They subsequently merged into the dominant race, and only a few of the tribe now exist.

Narva. A town of Russia in Europe, in the government of St. Petersburg, on the Narova, 8 miles from its mouth, and 90 miles southwest from St. Petersburg. Near this town on November 30, 1700, Charles XII. at the head of 8000 Swedes, defeated Peter the Great with about 80,000 Russians. It was taken by Peter in 1804.

Nasamones. A powerful but savage Libyan people, who dwelt originally on the shores of the Great Syrtis, but were driven inland by the Greek settlers of Cyrenaica, and afterward by the Romans.

Naseby. A parish and village of England, in the county of Northampton, 12 miles north of the town of that name. The battle of Naseby, between Charles I. and the Parliamentary army under Fairfax and Cromwell, took place here, June 14, 1645. It resulted in the total defeat of the royalists, the king being compelled to flee, after losing his cannon and baggage, and nearly 5000 of his army as prisoners.

Nashville. A city and capital of the State of Tennessee, situated on the left bank of the Cumberland River, about 200 miles from its mouth. During the civil war, after the fall of Fort Donelson, it was occupied by the Union forces, February 24, 1862. Within a few miles of the city was fought the memorable battle which bears its name, between the Confederate forces under Gen. Hood and the Union troops under Gen. George H. Thomas, December 15-16, 1864. The battle commenced by a feint on Hood's right and a real attack on his left, which resulted in driving it a distance of 8 miles, and the capture of over 1000 prisoners, 20 wagons, and 16 pieces of artillery. During the ensuing night, Gen. Hood contracted his lines, and next day the battle was renewed with vigor, towards the afternoon becoming close and obstinate. Near dusk the Confederates gave way, and a total rout soon followed. Some 4000 prisoners were captured, over 50 pieces of artillery, and an immense number of small-arms. On the 17th the pursuit of the enemy was continued and many more prisoners captured. Hood escaped with a mere wreck of his army, and was soon after relieved of command.

Nasir-Jung (*Ind.*). Victorious, or triumphant in war.

Nassau, House of. A noble family of German origin, which produced many great men, and derived its title from Nassau, on the Rhine. In the 16th century the family acquired the principality of Orange, in the southeast of France; after which the counts of Nassau took the title of Prince of Orange.

Natchez, or Natches. A tribe of Indians who formerly occupied four or five villages situated east of the Mississippi in a tract of country which embraced the site of the city of that name. They were generally friendly to the early French settlers; but in 1729, being enraged by the brutal avarice of Chopart, the commander of the garrison, who demanded as a plantation the very site of their principal village, they concerted a general massacre of the French, which they effected November 28, killing about 200 and holding the women and children captives. The French took a bloody and terrible revenge. Under the leadership of Le Sueur, a Frenchman, 700 Choctaws broke upon the slumbers of the Natchez on the night of

January 28, 1780, liberated the captives, and with a loss of but two of their number, brought off 60 scalps and 18 prisoners. On February 8 following the French under Loubois completed the ruin of the tribe. Some fled to the neighboring tribes and some crossed the Mississippi to the vicinity of the Natchitoches. They were pursued and their places of refuge taken. Of the scattered remnants some remained with the Chickasaws, others settled with the Muskogees, and about 400 were shipped to San Domingo and sold as slaves. Thus perished the Natchez as an independent tribe.

Natchitoches. A tribe of Indians allied to the Caddos, who formerly lived on Red River, La. They were dispossessed of their territory by the fugitive Natchez in 1731, and settled permanently with the Caddos, with which tribe a few still exist.

National Armory. See **ARMORY, NATIONAL.**

National Cemeteries. In the United States, are the burial-places for soldiers. They are called national because they belong to and are cared for by the general government.

National Flag. See **FLAG.**

National Guards. The militia organizations of several States of the United States and of some foreign countries are so called. In the United States they are authorized by State laws, and may be called into the service of the general government. After the destruction of the Bastille, a similar organization, called the *garde nationale*, was formed in Paris from the bourgeois class in 1789, under Lafayette as colonel-general. Napoleon subsequently defeated and dispersed it, but it was again organized by him in 1814. The national guard was adopted as an institution under the Restoration, and the Comte d'Artois appointed colonel-general. By decree of 1852 the government reserved the right of organizing or suppressing the national guard in *communes*, and also of nominating all the officers, who up to this time had been elected. The French national guard fought in the war of 1870-71, and also participated in the Communist struggles.

National Military Homes. See **SOLDIERS' HOMES.**

National Salute. In the United States, a salute of one gun for each State in the Union.

National Troops. Are those raised under the authority of Congress, in contradistinction to the militia, which may be called State troops, being organized by the several States.

Native Cavalry. A body of natives in the East Indian army, formed into light dragoons.

Native Infantry. A body of native troops in the East Indian army.

Natural Angle of Sight. The angle which the natural line of sight makes with the axis of the piece.

Natural Fortification. See **FORTIFICATION.**

Natural Line of Sight. See **LINE OF METAL.**

Natural Steel. See **ORDNANCE, METALS FOR STEEL.**

Naumburg. A town of Prussia, province of Saxony, 18 miles south-southwest from Merseburg. It was besieged in 1482 by the Hussites under Procopius; but they were induced to raise the siege by the entreaties of the children of the town. Naumburg was a place of importance in the Thirty Years' War, as well as in the campaigns of 1806 and 1818.

Nauplia. A small fortified town and seaport in the Morea, Greece. At an early period it was the port and arsenal of Argos; occupied by the Venetians in the 18th century; taken by the Turks in 1640, and again in 1716. The Turks lost it on the outbreak of the Greek insurrection.

Navajo Indians. A numerous and warlike tribe of the Shoshone family, who are located to the number of about 12,000 on a large reservation in New Mexico. They were for a long time at war with the whites, but have at length been thoroughly subdued, and are gradually adopting semi-civilized habits. They are famous for the manufacture of a peculiar blanket of excellent quality which bears their name.

Naval Camp. In military antiquities, a fortification, consisting of a ditch and parapet on the land side, or a wall built in the form of a semicircle, and extended from one point of the sea to the other. This was beautified with gates, and sometimes defended with towers, through which they issued forth to attack their enemies. Towards the sea, or within it, they fixed great piles of wood, like those in their artificial harbors; before these the vessels of burden were placed in such order, that they might serve instead of a wall, and give protection to those without; in this manner Nicias is reported by Thucydides to have encamped himself. When their fortifications were thought strong enough to defend them from the assaults of enemies, the ancients frequently dragged their ships on shore. Around these ships the soldiers disposed their tents, as appears everywhere in Homer. But this seems only to have been practiced in winter, when their enemy's fleet was laid up, and could not assault them; or in long sieges, and when they lay in no danger from their enemies by sea, as in the Trojan war, where the defenders of Troy never once attempted to encounter the Grecians in a sea-fight.

Naval Crown. In heraldry, a rim of gold, round which are placed alternately prows of galleys and square-sails. A naval crown supporting the crest in place of the wreath, occurs in various grants of arms in the early part of the present century to naval heroes. The crest of the Earl of St. Vincent, bestowed on him after his victory over the Spanish fleet in 1797, is issuing out of a naval crown or, enwrapped by a wreath of laurel vert, a demi-pegasus argent maned

and hoofed of the first, and winged azure, charged in the wing with a fleur-de-lis or.

Navarre. A province, and formerly a kingdom, of Spain, is bounded on the north by France, on the south and east by Aragon, and on the west by the Biscays. It was occupied in ancient times by the Vascones, who were subdued by the Goths in the 5th century: After having become gradually amalgamated with their conquerors, the people continued to enjoy a species of turbulent independence under military leaders until the 8th century, when they were almost annihilated by the hordes of Arabs who were rapidly spreading their dominion to all parts of the peninsula. Navarre was conquered from the Saracens by Charlemagne, 778. In 1076, Sancho Ramirez of Aragon seized Navarre. During the war of independence and the civil war, the province produced bands of formidable guerrilleros.

Nave. In gun-carriages, that part of a wheel in which the arms of the axle-tree move, and in which the spokes are driven and supported.

Nave-boxes. Are boxes which are placed in the naves; they were formerly made of brass, but experience has shown that those of cast iron cause less friction, and are much cheaper. There are two, one at each end, to diminish the friction of the axle-tree against the nave.

Nave-hoops. Are flat iron rings to bind the nave; there are generally three on each nave.

Navel. A lug with a hole through it on the under side of a carronade, used to connect it with its carriage.

Naxos, or Naxia. An island in the Ægean Sea, and the largest of the Cyclades; is situated nearly half-way between the coasts of Greece and Asia Minor. It was conquered by Pisistratus, who established Lydamis as tyrant of the island about 540 B.C. The Persians in 501 attempted, at the suggestion of Aristagoras, to subdue Naxos, but failed; Aristagoras, fearing punishment, induced the Ionian cities to revolt from Persia. In 490 the Persians, under Datis and Artaphernes, conquered Naxos, and reduced the inhabitants to slavery. The Naxians recovered their independence after the battle of Salamis (480). They were the first of the allied states whom the Athenians reduced to subjection, 471. After the capture of Constantinople by the Latins in 1204, the Ægean Sea fell to the lot of the Venetians; and Marco Sanudo in 1207 took possession of Nuxos, and founded there a powerful state under the title of duchy of the Ægean Sea. His dynasty ruled over the greater part of the Cyclades for 360 years, and was at length overthrown by the Turks in 1566. Naxos now belongs to the kingdom of Greece.

Naxos. A Greek city on the eastern coast of Sicily, south of Mount Taurus; was founded 785 B.C. by the Chalcidians of Eubœa, and was the first Greek colony estab-

lished in the island. It carried on a successful war against Messina, and was subsequently an ally of the Athenians against Syracuse. In 408 the town was taken by Dionysius of Syracuse, and destroyed.

Nebraska. One of the Central States of the United States, lying west of the Missouri River. Nebraska formed a part of the great grant of the Mississippi Valley to Crozat in 1712, and was part of the territory included in Law's celebrated Mississippi scheme. It came into possession of the United States in 1803, as a portion of the Louisiana purchase. In 1804, Lewis and Clarke explored the interior and western parts of the State. In 1854 it was erected into a Territory, and in 1867 admitted as a State.

Necessaries. The articles issued to the British soldier, such as boots, shirts, stockings, razor, etc., which are requisite for his comfort and cleanliness, are technically termed regimental necessaries. Non-commissioned officers are not allowed to sell regimental necessaries to the soldiers. Every article is directed by the regulations to be marked with the owner's name, the letter of his company, and the number of his regiment; and the sale or injury of them renders him liable to be tried by court-martial and punished.

Neck. The elbow or part connecting the blade and socket of a bayonet.

Neck Line. An old term in fortification signifying the gorge.

Neck of a Cascabel. The part joining the knob to the base of the breech.

Neck of a Gun. The small part of the piece in front of the chase.

Needle. A slender bar of steel, usually pointed, and resting on a vertical pivot, in a mariner's, or other compass, so as to turn freely towards the magnetic poles of the earth by virtue of the magnetic polarity with which it has been artificially endued; called also the *magnetic needle*.

Needle-Gun (Ger. *Zundnadelgewehr*). Is a breech-loading gun, so constructed that by pulling the trigger a stout needle or wire is thrust through the base of the cartridge, parallel with its axis, into the detonating charge behind the ball, causing explosion and the ignition of the cartridge. This gun was the regulation arm of the German infantry until it was replaced by the Mauser, a gun somewhat similar. The gun was invented by Nicolaus Dreyse, of Sömmerda, Prussia, where it is manufactured. It was first used by the Prussians in 1848, and again in the Italian war of 1866, when it proved a fearful instrument of destruction, and to it may be ascribed in a great measure the success of its employers.

Neemuch. In Hindostan, a town with a British cantonment, in the territory of Gwalior, or possessions of Scindia. The native troops stationed at this place participated in the general mutiny of the Bengal army. The rising took place on the night of June

3, 1857, when a general massacre of the Europeans took place. The work of slaughter was commenced by the artillery, and all the native troops joined heartily in it. A native officer opened the gate of the fort and gave entrance to the rebels. Having committed the most frightful enormities, and outraged every law of humanity, a large body of the miscreants marched in the direction of Agra.

Neerwinden. A village of Belgium, in the province of Liège. William III. of England was defeated by the Duke of Luxemburg between this place and Landen in 1693; the French were also defeated here in 1798 by the Austrians.

Neeschungpat (*Ind.*). A violent assault without bloodshed.

Negapatam. A considerable seaport in the south of India, and province of Tanjore. In 1660 it was taken from the Portuguese by the Dutch. It was a very flourishing city in 1781, when it was besieged and taken by the British with about 4000 troops, and finally ceded to them at the peace of 1788.

Negative. This term is sometimes used to express the result of measures or enterprises which, though not entirely successful, are not productive of serious or mischievous consequences. Hence the British expeditions to Spain and Walcheren may be considered as having had negative success.

Negative Penalty. Deprived of command; a bar to indulgence; a reprimand; etc.

Neglect of Duty. Is total omission or disregard of any prescribed service, or unsoldier-like execution, which is punishable at the discretion of a court-martial. See APPENDIX, ARTICLES OF WAR, 62.

Negrais. An island, harbor, and cape of the Eastern Peninsula, situated on the southwest extremity of the kingdom of Pegu. In 1687 a settlement was founded here by the British; it was soon after abandoned; again occupied by the British in 1751; it was attacked by the Burmese in 1759, and nearly all the inhabitants were put to death.

Negropont. See CHALCIS.

Nelli-Cotah. A fort situated about 40 miles to the south of Tinnevely, East Indies. This fort has been rendered memorable by the manner in which it was carried by the English in 1755, and the barbarity with which the garrison was treated which had not killed a man and had called for quarter, and yet men, women, and children, to the number of about 400, were massacred.

Nepaul, or Nipal. An extensive country of Hindostan. It is said to have been completely subdued in 1328 by Hurr Singh, one of the princes of Oude, who was driven out of his own possessions by the Patans. Runjeet Mull was the last of the Surya Bansi race that reigned in Nepaul. He formed an alliance with Purthi Nirain, which ended in the loss of his dominions, of which he was stripped by his ally in 1768. It was in his reign that Capt. Kinloch with a British force endeavored to penetrate into Nepaul,

but from the sickness of the troops, and the difficulty of the country, the enterprise was abandoned. In 1790 the Nepaul government became involved in a war with the emperor of China, who sent against them an army of 70,000 men, and defeated the Nepaulese in repeated battles. A peace was at last concluded, though on terms ignominious to the Nepaulese, who were compelled to become tributaries to the Chinese. In the year 1814 the British commenced a war against the Nepaulese, and, after a long and arduous struggle, during which the British suffered a number of reverses, the Nepaulese were compelled to sue for peace.

Nervii. A nation of Gallia Belgica, whose territory was situated north of the Ambiani. On receiving intelligence that Cæsar was advancing into their country, the inhabitants sent away their old men, women, and children to a place of refuge among the marshes by the sea-shore, and posted themselves in ambush on the banks of the Sabis (*Sambre*). The invaders had approached to the place of concealment, and, unsuspecting of any danger, were engaged in forming a camp, when they suddenly found themselves attacked by 60,000 fierce barbarians. The Romans would have been immediately routed, had not the invincible genius of Cæsar been there to sway and turn the tide of battle. After a hard-fought contest, the Nervian forces were almost annihilated; but the Nervii were not yet subdued. In 54 B.C. they assisted the Eburones in the unsuccessful attack upon the camp of Quintus Cicero; and it was not until the following year that they finally submitted to the Romans.

Neshaumburdar (*Ind.*). An ensign.

Netherlands, Kingdom of the. A country in the northwest of Europe. The name of the Netherlands was, for several centuries, applied to the countries which now form the kingdoms of Belgium and the Netherlands and part of the north of France. The greater portion of this territory was held by the Spaniards until Marlborough, the general in command of the allied forces, gained the memorable victory of Ramilies in 1706. After this, Brussels, the capital, and great part of these provinces acknowledged Charles VI., afterwards emperor of Germany, for their sovereign. They were held by the German house until the war of 1741, when the French made an entire conquest of them, except part of the province of Luxemburg. They were restored, however, by the peace of Aix-la-Chapelle, in the year 1748. In 1794 Holland was overrun by the troops of the French republic, and annexed to the French empire in 1810, after having been formed into the Batavian republic, and subsequently into a kingdom under Louis Bonaparte. In 1814 the royal family of Holland was restored, and two years after Holland and Belgium were once more reunited under the common title of the Netherlands; but in 1830 Belgium became a distinct kingdom. See BELGIUM, HOLLAND, and FLANDERS.

Netley, Royal Victoria Hospital at. Is a superb building on the shore of Southampton Water, Hants, England, for the reception of invalids from the army on foreign service, and from among the troops serving in the adjoining military districts. In times of peace, it is only necessary to use a portion of the vast structure; but in the event of a European war, in which the British army should take part, the exigencies of the service would probably tax its accommodation to the utmost. There is provision for 1000 patients, with power to increase the number. The establishment has a complete medical staff. Netley is also the headquarters of the female nurses of the army, who are under the control of a lady stationed here as superintendent-general. Complete arrangements have been made for the landing of wounded men in front of the hospital, and for conveying them thither with the least disturbance. See **MEDICAL SCHOOL**.

Nettoyer les Magazines (Fr.). In artillery, signifies to remove the different pieces of ordnance, for the purpose of having them carefully examined, etc., and to have the stores and ammunition so arranged as not to receive damage.

Nettoyer les Tranchées (Fr.). To scour or clear the trenches. This is effected by means of a vigorous sally which the garrison of a besieged place make upon the besiegers; when they beat in the guard, drive off the workmen, level the parapet, break up and choke the line of circumvallation, and spike or nail the cannon.

Neusatz. A town of Hungary, on the Danube, opposite Peterwardein. On June 11, 1849, it was taken from the Hungarian insurgents by the imperial troops, and was almost wholly destroyed.

Neutral. Not engaged on either side; not taking part with either of contending parties; neuter.

Neutral. A person or nation that takes no part in a contest between others.

Neutral Powers. By the treaty of Paris, signed by the representatives of Great Britain, France, Austria, Russia, Prussia, Turkey, and Sardinia, on April 16, 1856, it was determined that privateering should be abolished; that neutrals might carry an enemy's goods not contraband of war; that neutral goods not contraband were free even under an enemy's flag; and that blockades to be binding must be effective. The President of the United States acceded to these provisions in 1861.

Neutrality. In international law, the state of a nation which takes no part between two or more other nations at war with each other. Neutrality consists in the observance of a strict and honest impartiality, so as not to afford advantage in the war to either party; and particularly in so far restraining its trade to the accustomed course, which is held in time of peace, as not to render assistance to one of the belligerents in escaping the effects of the other's hostili-

ties. Even a loan of money to one of the belligerent parties is considered a violation of neutrality. A fraudulent neutrality is considered as no neutrality.

Neutrality, Armed. See **ARMED**.

Nevada. One of the Pacific States of the United States. Nevada is a part of the territory ceded to the United States by Mexico in 1848. It was at first a part of California Territory; it was subsequently attached to Utah; in March, 1861, was organized as a Territory; and on October 31, 1864, was admitted as a State.

Nevers. A town of France, the capital of the department of Nièvre, situated on the right bank of the Loire, 153 miles south-southeast from Paris. The town is ancient, and is mentioned by Cæsar under the name of Noviodunum. Here that general, in 52 B.C., fixed his headquarters, and here he left his hostages, supplies, baggage, and military chest. After his defeat at Gergovia, the people of Noviodunum rose against the Romans, massacred all of them who were in the town, and plundered the stores.

Neville's Cross (or Durham), Battle of. Fought between the Scots under King David Bruce, and the English under Philippa, consort of Edward III., and Lord Percy, October 12 or 17, 1346. More than 15,000 of the Scots were slain, and their king taken prisoner.

Nevis, or Nievis. One of the West India Islands, belonging to Great Britain, and separated from the south extremity of St. Christopher by a channel about 2 miles in width. It was taken by the French February 14, 1782; restored to the English in 1783.

Newark. A town of England, in Nottinghamshire, on the Newark River, 16 miles northeast from Nottingham. Here, in the midst of troubles, died King John, October 9, 1216; here the royal army under Prince Rupert repulsed the army of the Parliament, besieging the town, March 21, 1644; and here, May 5, 1646, Charles I., after his defeat at Naseby, put himself into the hands of the Scotch army, who afterwards gave him up to his enemies.

Newbury. A town of England, in Berkshire, on the Kennet, 15 miles southwest from Reading. Near here were fought two desperate battles: (1) On September 20, 1643, between the army of Charles I. and that of the Parliament under Essex; it terminated somewhat favorably for the king. (2) A second battle of dubious result was fought between the royalists and the Parliamentarians, October 27, 1644.

New Caledonia. An island of the South Pacific Ocean, discovered by Cook on September 4, 1774; seized by the French September 20, 1853. The French government in December, 1864, redressed the outrages committed on British missionaries at a station established here in 1854.

Newcastle-upon-Tyne. A river-port and the chief town of the county of North-

umberland, England, 14 miles north from Durham. The Romans had a stationary camp here, called *Pons Ælii*, one of the chain of forts by which the Wall of Hadrian was fortified. Newcastle surrendered to the Scotch in 1646, who here gave up Charles I. to the Parliament in 1646. The town occupied by Gen. Wade in 1746.

New England. The name given by Capt. John Smith, in 1614, to the territory granted by James I. to the Plymouth Company for colonization, which now comprises the States of Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, and Connecticut. For history of New England, see these States under appropriate headings.

Newfoundland. A large island of British North America, at the mouth of the Gulf of St. Lawrence. Newfoundland is supposed to have been discovered by the Norwegians, or Northmen, about the year 1000; it was rediscovered by John Cabot on June 24, 1497; a settlement was subsequently formed here by some Portuguese adventurers, who were in their turn expelled by Sir Francis Drake in the reign of Elizabeth. After this period numerous English colonies were established from time to time along the east coast, and several French along the south coast, in the Bay of Placentia. The French often tried to conquer the island, and during the French and English wars it was the scene of many bloody events. In 1713, Newfoundland and its dependencies were declared, by the treaty of Utrecht, to belong wholly to Great Britain; the French reserving a right to fish on certain parts of the coast. In 1728 the island was made a province of Great Britain.

New Grenada (now United States of Colombia). A republic in the northwest of South America, discovered by Ojeda in 1499, and settled by the Spaniards in 1536. It formed a part of the new republic of Bogota, established in 1811, and combined with Caracas, formed the republic of Colombia, December 17, 1819. (See COLOMBIA, UNITED STATES OF.) A struggle took place between the conservative partisans of the old government and the liberals, January, 1861, and Gen. Mosquera (liberal) deposed Ospina and seized the government, July 18, 1861. Mosquera invited Venezuela and Ecuador to join the confederation, August, 1863; Ecuador declined, which resulted in a war, which commenced November 20, 1863. The troops of Ecuador were defeated, December 6; peace ensued, and Ecuador remained independent, December 30, 1863; Mosquera declared himself dictator, by a *coup d'état*, March 11, 1866; he was deposed by Santos Acosta, May 28, 1867; Gen. Ponce was made provisional president, July, 1868, and was succeeded by Correo, August 29, who defeated his opponents, November 12, 1868.

New Hampshire. One of the Eastern States, and one of the original thirteen of the American Confederacy. New Hampshire was first visited in 1614, and was

settled near Portsmouth in 1623. It was several times connected with Massachusetts up to 1679, when it became a royal province, but renewed its connections with Massachusetts in 1689, and was for a short time attached to New York; finally, in 1741, it became an entirely separate province, and so remained till the Revolution. New Hampshire was much harassed by the Indians, and in 1689 a party of them sacked Dover, killed many of the whites, and burnt the town. No important action took place on the soil of this State, either in the war of the Revolution or that of 1812. The State contributed greatly to the cause of the Union in the late civil war.

New Jersey. One of the Middle Atlantic States, and one of the original thirteen of the American Confederacy. Settlements were made at Bergen, in New Jersey, soon after their arrival in New York, by the Dutch, between the years 1614 and 1624. The whole of the region lying between the Delaware and the Hudson was claimed by them, although the Swedes had made some settlements in the western part of the same country. These claims, however, were disregarded by the British; and in 1664, Charles II. granted to the Duke of York the whole of this country, and in the same year the duke sold it to Lord Berkeley and Sir George Carteret, in honor of the latter of whom, a native of Jersey, it received the name which it still bears. The Dutch again got possession of it in 1673, but resigned it on the conclusion of peace in the following year. New Jersey escaped the inroads of the savage tribes which desolated and afflicted most of the older colonies; but in the war of the Revolution it suffered greatly, and was the scene of many important battles, such as Trenton, Princeton, Millstone, Red Bank, and Monmouth. In the late civil war, New Jersey contributed greatly to the cause of the Union, and her regiments were distinguished on many important battle-fields.

New Matter (in military courts). Should either party, in the course of their examination of witnesses, or by bringing forward new ones for that purpose, introduce new matter, the opposite one has the right of calling other witnesses to rebut such new matter. A prosecutor, however, cannot be allowed to bring forward evidence to rebut what has been elicited by his own cross-examination, but must be confined to new matter introduced by the accused, and supported by the examination-in-chief of the accused. The court should be very circumspect to see and prevent new matter from being introduced, either in the prosecution or defense. But the accused may urge in his defense mitigating circumstances, or examine witnesses as to character or service, and produce testimonials of such facts, without its being considered new matter; and if any point of law be raised, or any matter requiring explanation, the judge-advocate may explain; no other reply is admitted.

New Mexico. A Territory of the United States, bounded on the north by Colorado, east by Texas, south by Texas and Mexico, and west by Arizona. The country was explored by the Spaniards in 1537, and was taken possession of by the viceroy of Mexico in the name of the king of Spain towards the latter part of that century. About 1680, the natives, who were an industrious people of Atztec race, provoked by the oppression of their rulers, rose against them and succeeded in driving them from the country. The Spaniards, however, soon regained their foothold, which they succeeded in maintaining until 1822, when Mexico and its dependencies threw off the yoke of Spain. In 1846, Gen. Kearney captured Santa Fé, the capital of New Mexico, and soon after became master of the whole Territory, which was ceded to the United States in 1848, and in 1850 organized as a Territory. In 1854 another portion of Mexican territory gained by purchase was added to it, and subsequently the Territory of Arizona was set off from it, and another portion added to Colorado. During the civil war New Mexico was the theatre of some desperate and hard-fought battles. On February 21, 1862, a Confederate force of Texans about 2500 strong, under Gen. Sibley, defeated the Union forces under Col. Canby at Valverde, about 10 miles from Fort Craig, and captured their guns. The loss of his battery compelled Col. Canby to fall back to Fort Craig, but the enemy was so crippled that he did not attempt to follow, but proceeded to Albuquerque and Santa Fé, both of which towns were evacuated by the Union troops. Soon afterwards a force of 400 Texans going north to reinforce Gen. Sibley were captured by Col. Canby. On March 28, 1862, an engagement took place at Apache Pass, in which 100 Texans were captured, between 300 and 400 killed, and 50 wagons burned. Another engagement took place on the 28th, at Pigeon's Rancho, 25 miles north of Santa Fé, in which the Confederates lost more prisoners. About the middle of April, Col. Canby concentrating his forces attacked the Texans at Parillo, on the Rio Grande, and after a short action defeated them with great slaughter, and compelled them to fly to the mountains. From this point until they reached Fort Bliss, Texas, their retreat was a succession of disasters. They left in New Mexico more than one-half of their original number as killed, wounded, or prisoners, and every place which they abandoned in their retreat was immediately occupied by Union troops.

New Model. In the United States, all cannon made since 1861 are on the new model. This is characterized by the absence of all ornament on the exterior,—the outline is made up of gentle curves as far as possible,—on the inside the bottom of the bore is a semi-ellipsoid.

New Orleans. Capital of the State of Louisiana, and commercial metropolis of the Gulf States. It was founded in 1718 by

Bienville, the governor of the province of Louisiana under the French, who caused it to be laid out, and levees built, under the direction of the engineer De la Tour. On January 8, 1815, was fought the battle of New Orleans, a few miles below the city, between Gen. Andrew Jackson at the head of the American forces, and the British under Gen. Pakenham, ending in the defeat of the latter with a loss in killed and wounded of nearly 3000 men. The American loss was but 13. In the late civil war, New Orleans held out until 1862, when it surrendered to the Union forces. Gen. Butler was placed in command, but on December 16, 1862, was relieved by Gen. Banks.

New Ross. A town in Wexford Co., Southeast Ireland, where Gen. Johnston totally defeated the insurgent Irish under Beauchamp D. Bagenal Harvey, June 4, 1798.

Newry. A town in Down Co., Ireland, which was reduced to a ruinous condition in the rebellion of 1641; it was surprised by Sir Con. Magenis, but was retaken by Lord Conway. After the restoration the town was rebuilt. It was burnt by the Duke of Berwick when flying from Schomberg and the English army, and only the castle and a few houses escaped, 1689.

Newtown-Butler. A town in Fermanagh Co., Ireland, where, on July 30, 1689, the Enniskilleners under Gustavus Hamilton thoroughly defeated the adherents of James II. commanded by Gen. Macarty, whom they captured with his artillery, arms, and baggage.

New Trial. The privilege of a new trial does not seem to be denied. The provisions therefore are borrowed from common law, and are not held, in either civil or military tribunals, to preclude the accused from having a second trial on his own motion. Officers who sat on the first trial should not be detailed for the new trial; they have formed and expressed opinions. New, or second trial, can only be authorized where the sentence adjudged upon the first trial has been disapproved. After a sentence has been duly approved and has taken effect, the granting of a new trial is beyond the power of a military commander, or the President.

New York. One of the Middle States of the United States, and one of the thirteen of the original confederation. The earliest explorations of New York by Europeans were in 1609, by Hendrik Hudson, who took possession of the country on the river which bears his name for the Dutch, and by Champlain, a Frenchman, who explored Lake Champlain from Canada. The English, however, claimed the right of prior discovery, which led to frequent conflicts. The first white settlements were made in the State in 1713, and the early settlers suffered greatly from Indian depredations. In 1690, Schenectady was taken and burned by the savages, and many of the inhabitants

massacred. The massacre of the garrison at Fort William Henry by the Indians in 1757 will long be remembered in the annals of New York. The State took an active part in the war of independence, and was the theatre of many important military events. The defeat of Washington at Long Island and at White Plains in the autumn of 1776, the surrender of Burgoyne in October, 1777, and the taking of Stony Point by Wayne in July, 1779, are the most important actions that took place here during the Revolutionary contest. The sanguinary naval battle of Lake Champlain in the war of 1812, in which McDonough defeated the British after a hard-fought action, and several other minor engagements, took place within the limits of New York in the last struggle with Great Britain. During the civil war New York took an active and prominent part in aiding the government in the suppression of the rebellion; her quotas of troops were promptly filled, \$40,000,000 being paid in bounties to her volunteers.

New York. The chief commercial city of the United States, and the most populous, is situated at the southern extremity of Manhattan Island, at the junction of the Hudson River and the extension of Long Island Sound, known as the East River, about 18 miles from the Atlantic. It was founded in 1613 by Dutch traders, who built two trading forts and four houses on Manhattan Island, and called the settlement New Amsterdam. It was taken by the English in 1664, and its name changed to New York in honor of the Duke of York, brother of Charles II. Nine years later it was recaptured by the Dutch, and its name changed to New Orange in honor of the prince of that title; but in February, 1674, the English obtained possession of it by treaty, and restored the name which they had formerly given it. During the Revolutionary war New York was occupied by the English troops after the battle of Long Island, and was evacuated by them November 25, 1783. In the civil war the city was among the first in manifesting its loyal disposition, and furnished over 116,000 men in support of the Union cause.

New Zealand. A group of islands lying in the South Pacific Ocean, discovered by Tasman in 1642. The right of Great Britain to New Zealand was recognized in 1814. An insurrection of the natives (Maoris) took place in March, 1860; several indecisive actions took place between the natives and the militia, March 14-28, 1860; war broke out at Taranaki, and the British were repulsed with loss on June 30; Gen. Pratt defeated the Maoris at Mahoetahi, and destroyed their fortified places November 6. The Maoris were defeated December 29, 1860, January 23, February 24, March 16-18, 1861; the natives surrendered March 19, 1861. The Maoris again resorted to war in May, 1863; Gen. Cameron defeated them at Ran-

gariri November 20; and forced the Maori king to capitulate December 9, 1863. The British were repulsed at Galepa (the gate pah) with loss of officers and men, April 29, 1864. The Maoris were again severely defeated January 25 and February 25, 1864. The Maoris continued in a state of insurrection, but were finally overcome in 1865.

Nez Percés Indians ("pierced noses"). A tribe of aborigines of the Sahaptin family, who were located on a reservation in Northern Idaho. In 1877 they broke into open hostilities against the whites, and after a sanguinary struggle under their chief Joseph they were at length captured by Gen. Miles and transported to Indian Territory. Some few escaped to the British possessions, where they still remain.

Niagara. Chief town of Lincoln County, in the Canadian province of Ontario, on Lake Ontario. It was burnt down in December, 1813, by the American general McClure on his retreat; it was afterwards rebuilt.

Niagara, Battle of. See LUNDY'S LAKE.

Nicæa (anc. *Nicaensis*, *Nicensis*). Formerly one of the most celebrated cities of Asia, stood on the eastern side of Lake Ascania (now *Isnik*), in Bithynia. At the battle of Nice, 394, the emperor Severus defeated his rival, Niger, who was again defeated at Issus, and soon after taken prisoner and put to death. Under the later emperors of the East, Nicæa long served as a bulwark of Constantinople against the Arabs and Turks; it was taken by the Seljuks in 1078, and became the capital of the sultan Soliman; it was retaken by the first Crusaders in 1097. After the taking of Constantinople by the Venetians and the Franks, and the foundation of the Latin empire there in 1204, the Greek emperor, Theodorus Lascaris, made Nicæa the capital of a separate kingdom, in which his followers maintained themselves with various success against the Latins of Constantinople on the one side, and the Seljuks of Iconium on the other, and in 1261 regained Constantinople. At length, in 1380, Nicæa was finally taken by Orchan, the son of the founder of the Ottoman empire, Othman.

Nicæa. A fortress of the Epicnemidian Locrians on the sea, near the pass of Thermopylæ, which it commanded. From its important position it is often mentioned in the wars of Greece with Macedonia and with the Romans. In the former its betrayal to Philip by the Thracian dynast Phalaecus led to the termination of the Sacred war, 346 B.C.; and after various changes it is found at the time of the wars with Rome in the hands of the Ætolians.

Nicaragua, Republic of. Formerly a State in the Central American Confederation, from which it withdrew in 1852. The inhabitants of the country are Indians and *mestizoes*, with a scattering of a few whites and negroes. It has been the scene of many revolutions for the last thirty-five years.

Nice (It. *Nizza*, anc. *Niceæ*). Chief town since 1860 of the department of the Maritime Alps, France, on both sides of the river Paglione, 100 miles south-southwest from Turin. It was the seat of a colony from Massilia, now Marseilles, and formed part of the Roman empire. It first became important as a stronghold of the Christian religion, which was preached there by Nazarius at an early period. In the Middle Ages it was subject to Genoa, and suffered from the frequent wars, being taken and retaken by the Imperialists and French. It was taken by the Austrians under Melas, 1800; seized and annexed to France, 1792; restored to Sardinia in 1814; again annexed to France in virtue of the treaty of March 24, 1860. The French troops entered April 1, and definite possession was taken June 14 following. Garibaldi protested vehemently against this annexation. The town of Nice is remarkable as the birthplace of Masséna, one of the most famous of Napoleon's generals.

Nicomedia (now ruins at *Ismid*, or *Iznik-mid*). A celebrated city in Asia Minor, capital of Bithynia, built by King Nicomedes I., 264 B.C., at the northeast corner of the Sinus Astacenus (now *Gulf of Ismid*). Like its neighbor and rival Niceæ, it occupied an important place in the wars against the Turks; it is memorable in history as the scene of Hannibal's death. It surrendered to the Seljukian Turks, 1078, and to Orchan and the Ottoman Turks in 1388.

Nicopolis, or **Nikopoli**. A town of Turkey in Europe, in Bulgaria, situated on the Danube. The Hungarians under Sigismund were defeated here in 1396 by the Turks.

Nicosia, or **Lefkosia**. The capital of Cyprus, stands near the centre of the island, on the right bank of the Pedia. In 1570 it was stormed by the Turks, who on that occasion put to the sword about 20,000 of the inhabitants.

Niemen, or **Memel**. A large river of Lithuania, which rises a few miles south of Minsk. Napoleon I. and Alexander of Russia held an interview on the waters of this river in 1807.

Nieuport. A fortified town of Belgium, in the province of West Flanders, 11 miles southwest from Ostend. This place has often been besieged and taken and retaken by the French and English.

Nigher (*Ind.*). Any fortified city measuring at least 8 coss, or 8 English miles, in length and breadth.

Night-firing. When a fixed object is to be fired at by night, the piece should be directed during the day, and two narrow and well-dressed strips of wood (to prevent injury to the strips from the recoil, they should be nailed at such a distance from the carriage that the space can be filled up with a strip that can be removed before firing) laid on the inside of the wheels, and two others out-

side of the trail of a siege carriage, and nailed or screwed to the platform. In case of a barbette carriage, the traverse wheels should be chocked in the proper position. To preserve the elevation, measure the height of the elevating-screw above its box, or take the measure between a point on the gun and another on the stock; cut a stick to this length and adjust the gun on it at each fire. *Direction* of fire may be secured at night with mortars by nailing or screwing two boards to the platform outside of the cheeks, and the *elevation* by drawing a line across one of the trunnions, or by inserting a wedge-shaped block of the proper inclination below the mortar and the front transom or step. Night-firing with guns should be limited to a small number of rounds, as it consumes ammunition to little advantage.

Night-signaling. An important branch of signaling. It may be effected in various ways. In ordinary service two torches are used,—one on the ground and the other attached to a staff, which is used precisely as the flag for day signals. Lanterns held in the hands can also be used. For long distances and when stations cannot be seen on account of intervening obstacles, such as woods, signal-rockets, candle-bombs, and other pyrotechnic devices are used.

Nihilists. The name given to a political party in Russia. Beyond the extinction of imperialism it is difficult to give their creed.

Nijni-Novgorod, or **Nijnei-Novgorod** (Lower Novgorod). A fortified town and the capital of the government of the same name in Russia. It is an ancient town, and was founded in 1221 by Prince Yuri Vsevolodovitch as a stronghold against the invasions of the Bulgarians and the Mordva. It was devastated on several occasions by the Tartars; and in 1612, during the civil dissensions in Russia, when it was on the point of falling a prey to Poland, Minin, the famous butcher of Nijni-Novgorod, collected an armed force here, which, under Prince Pojarsky, drove the invaders from the capital.

Nikolsburg, or **Mikulov**. A town of Austria, in the south of Moravia, 27 miles south of Brunn. Here were signed, July 26, 1866, the preliminaries of a peace between Austria and Prussia.

Nile, **The**. A river of Northeastern Africa, and one of the most powerful, most interesting, and most celebrated rivers on our globe. Near Rosetta, at the mouth of the Nile, a naval battle took place, August 1, 1798, between the Toulon and British fleets, the latter commanded by Lord (then Sir Horatio) Nelson. Nine of the French line-of-battle ships were taken, two were burnt, and two escaped. The French ship *L'Orient* with Admiral Bruëys and 1000 men on board, blew up, and only 70 or 80 escaped. This engagement is also called the battle of Aboukir.

Nimeguen, or **Nymwegen**. The *Noviomagum* of the Romans, called by Tacitus

Bataworum oppidum, and in the Middle Ages *Numaga*, is the principal city of the district of the same name, or the *Betuwe*, in Holland, province of Guelderland. Nimeguen is celebrated for the great peace congress of the European powers which was held here, and, August 10, 1678, concluded a treaty between Spain and France on September 17, between France and the United Netherlands, and between the German empire and France, and the same empire and Sweden, February 5, 1679. The French were successful against the British under the Duke of York before Nimeguen, October 28, 1794; but were defeated by them November 8.

Nimes, or Nismes (anc. *Nemausus*). A city of France, and the chief town of the department of the Gard, 80 miles northeast from Montpellier. Previously to the Roman invasion, it (supposed to have been founded by a colony from Massilia) was the chief city of the *Volcæ Arecomici*. It surrendered to the rule of the Visigoths between 465 and 585, and afterwards to that of the Franks; subsequently, it became a possession of Aragon; but was finally restored to France in 1259 by the treaty of Corbeil. In 1791 and 1815, bloody religious and political reactions took place here. The treaty termed the Pacification of Nimes (July 14, 1629) gave religious toleration for a time to the Huguenots.

Nimrûd, or Nimroud. The Arab name of the great mound on the east bank of the Tigris, near Mosul, supposed to represent the Assyrian city of Calah, which was destroyed at the final conquest of Assyria by the Medes and Babylonians.

Nineveh. The greatest city in Assyria and for some time the capital of the country, was situated on the eastern bank of the Tigris at its junction with the stream of the Khosr. The walls of Nineveh are described as about 55 miles in circumference, 100 feet high, and thick enough to allow three chariots to pass each other on them; with 1500 towers, 200 feet in height. The city is said to have been entirely destroyed by fire, when it was taken by the Medes and Babylonians, about 606 B.C.

Ninians, St. A town and parish of Scotland, in Stirlingshire, about a mile south from Stirling. Several battles have been fought in this parish. The first was between the Scottish followers of Wallace and the English, who were defeated, the second was the famous battle of Bannockburn, and the third was that in which James III. of Scotland was defeated and slain by his rebellious nobles.

Nipple. Any small projection in which there is an orifice for discharging a fluid, or for other purposes, as the nipple of a percussion-lock, or that part on which the cap is put to be fired.

Niquiba (*Ind.*). Men whose military functions among the Sepoys correspond with those of corporals in other services.

Nisbet, or Nesbit (Northumberland,

Eng.). Here a battle was fought between the English and Scotch armies, the latter greatly disproportioned in strength to the former. Several thousands of the Scots were slain upon the field and in the pursuit, May 7, 1402.

Nishapoor, or Nishapur. A town of Persia, province of Khorassan. The town is said to be very ancient, and to have existed in the time of Alexander the Great, by whom it was destroyed. In 1269 it was sacked by the Tartars, again by Ibhengiz-khan, and in 1749 by Nadir Shah, from which last calamity it has never recovered.

Nisibis. The capital of ancient Mygdonia, the northeastern part of Mesopotamia. It was a place of great importance as a military post, was twice taken by the Romans (under Lucullus and Trajan), and again given up by them to the Armenians; but being a third time taken by Lucius Verus in 165, it remained the chief bulwark of the Roman empire against the Persians, till it was surrendered to them by Jovian after the death of Julian in 363.

Nissa, or Nish. A well-fortified town of Turkey in Europe, in the province of Servia, about 120 miles southeast from Belgrade. It commands the communication between the provinces of Servia, Bulgaria, and Roumelia. It was taken by Amurath II. in 1389, and again by the Austrians in 1787.

Nithing. A coward or poltroon.

Nitre. Potassium nitrate or saltpetre, the most important ingredient of gunpowder. It is obtained principally from the East Indies. It has been the policy of the American government to keep large quantities in store. See **SALTPETRE**.

Nitro-cellulose. See **GUN-COTTON**.

Nitro-glycerine. Is a light, yellow, oily liquid, inodorous, with a sweet, pungent, aromatic taste. It received its name from Sobrero, a chemist, who in 1847 discovered that glycerine when treated with nitric acid was converted into a highly-explosive substance. This liquid appears to have been almost forgotten by chemists until in 1864 Nobel, a Swedish engineer, succeeded in applying it to a very important branch of his art, namely, blasting. It is now prepared by introducing glycerine into a mixture of nitric and sulphuric acids, the whole being kept at a temperature below freezing-point. When uncongealed this preparation explodes by concussion, and is therefore unfit for transportation, and very dangerous to handle while in that state. The chief advantage for mining purposes which nitro-glycerine possesses is, that it requires a much smaller hole or chamber than gunpowder does, the strength of the latter being scarcely one-tenth of the former. Hence the miner's work, which, according to the hardness of the rock, represents from five to twenty times the price of the gunpowder used, is so short that the cost of blasting is often reduced 50 per cent. The process is very easy: if the chamber of a mine presents

assures it must first be lined with clay, to make it water-tight; this done, the nitro-glycerine is poured in, and water after it, which, being the lighter liquid, remains at the top. A slow-match, with a well-charged percussion-cap at one end, is then introduced into the nitro-glycerine. The mine may then be sprung by lighting the match, there being no need of tamping. Submarine mines may be sprung by electricity. In this manner the obstructions of Hell Gate, N. Y., were removed by Gen. Newton, one of the greatest engineering feats of the time. On account of its liability to spontaneous explosion, the great danger in handling it, and its liability to decomposition, nitro-glycerine is now almost entirely superseded for ordinary mining purposes by dynamite.

Nitroleum. Nitro-glycerine; a name given it by Shaffner, an American patentee of high explosives.

Nitro-mannite. See MANNITE, NITRO-

Nive. A river in the southwest of France, the scene of an important battle, December, 1813. After Wellington had forced Marshal Sault to fall back on Bayonne from the Pyrennes, the former determined to cross the Nive in order to place the right of his own army upon the Adour, with the double purpose of establishing a communication with the interior of France, and cutting off the enemy's means of obtaining supplies. The brunt of this enterprise fell upon the right division of Wellington's army under Lord Hill, a good deal of work, however, being done by the left division under Sir John Hope. Hill's success was complete, and after five days' fighting (December 9-13), the passage of the Nive had been effected, with the loss on the part of the British of 650 killed and 8459 wounded.

Nivelle. A small river which rises in Spain, and, after a short course, falls into the Bay of Biscay at St. Jean-de-Luz, in the French department of the Lower Pyrennes, near which the Duke of Wellington crossed the river in 1812, after carrying the French posts.

Nizam's Dominions, or Hyderabad. An extensive territory in the interior of Southern India, lying to the northwest of the Presidency of Madras. In 1687 the territory now known as the Nizam's Dominions, became a province of the Mogul empire; but in 1719 the governor or viceroy of the Decan, Azoph Jah, made himself independent, and took the title of *Nizam-ool-Moolk* (Regulator of the State). After his death, in 1748, two claimants appeared for the throne, —his son Nazir Jung, and his grandson Mirzapha Jung. The cause of the former was espoused by the East India Company, and that of the latter by a party of French adventurers under Gen. Dupleix. Then followed a period of strife and anarchy. In 1761, Nizam Ali obtained the supreme power, and after some vacillation signed a treaty of alliance with the English in 1768. He aided them in the war with Tippoo Sahib, sultan of

Mysore, and at the termination of that war, in 1799, a new treaty was formed, by which, in return for certain territorial concessions, the East India company bound itself to maintain a subsidiary force of 8000 men for the defense of the Nizam's dominions. The Nizam or ruler, *Afsul-ul-Dowlah*, remained faithful to the British during the mutiny of 1857-58.

Nizza-Montferrato. A town of northern Italy, province of Alessandria, on the Belbo. It was a strongly-fortified place during the Middle Ages, was besieged unsuccessfully for forty days by Charles of Anjou, and afterwards suffered severely from the Spanish and French armies.

Noblesse Militaire (Fr.). Military nobility. Although most of the orders may be considered as appendages which confer a species of military nobility, especially that of the British "Garter," which was instituted by King Edward III. on January 19, 1844, yet the British cannot be strictly said to have among them that species of military nobility or distinction that was peculiarly known in France under the immediate title of *noblesse militaire*. In order to reward military merit, an edict was issued by the French court at Fontainebleau, in November, 1750, and enregistered on the 25th of the same month by the Parliament of Paris, whereby a *noblesse militaire*, or military nobility, was created; the acquisition of which depended wholly upon martial character, but did not require any letters patent for the purpose of ennobling the individual. By the first article of this perpetual and irrevocable edict, as it was then stated, it was decreed that no person serving in the capacity and quality of officer in any of the king's troops, should be liable to the land- or poll-tax, so long as he continued in that situation. (2) That by virtue of this edict, and from the date thereof, all general officers, not being otherwise ennobled, but being actually and bona fide in the service, should be considered as noble, and remain so, together with their children, born or to be born in lawful wedlock. (8) That in future the rank of general officer should of itself be sufficient to confer the full right of nobility upon all those who should arrive at that degree of military promotion; and that their heirs and successors, as well as their children, actually born and lawfully begotten, should be entitled to the same distinction; and that all general officers should enjoy all the rights and privileges of nobility from the date of their commissions. In Articles IV., V., VI., and VII., it was specifically provided upon what conditions those officers, who were not noble, and were inferior in rank to that of *maréchal-de-camp*, but who had been chevaliers or knights of the royal and military order of St. Louis, and who should retire from the service after having been in the army during thirty years without intremission, were to be exempted from the payment of the land- and poll-tax, and how

the same privileges were to be transferred to their sons, provided they were in the service. By Article VIII. it was enacted, that those officers who had risen to the rank of captain, and were chevaliers or knights of the order of St. Louis, but who were disabled by wounds, or diseases contracted in the service, should not be obliged to fill up the period of thirty years as prescribed by the recited articles. By Article IX. it was provided that when any officer, not under the rank of captain, died in the actual exercise of the functions or bearing the commission of captain, the services he had already rendered should be of use to his sons, lawfully begotten, who were either in the service or were intended for it. It was specified in Articles X. and XI. that every officer born in wedlock, whose father and grandfather had been exempted from the land- or poll-tax, should be noble in his own right, provided he got created a chevalier or knight of St. Louis, had served the prescribed period, or was entitled to the exemption mentioned in Article VIII.; that if he should die in the service, he would be considered as having acquired the rank of nobility, and that the title so obtained should descend, as a matter of right, to the children, lawfully begotten, of such officers as had acquired it. It further specified, that even those who should have been born previous to their fathers being ennobled, were entitled to the same privilege. Article XII. pointed out the method by which proofs of military nobility were to be exhibited in conformity to the then existing edict. Articles XIII. and XIV. provided for those officers, who were actually in the service at the promulgation of the edict, in proportion as the prescribed periods were filled up. This provision related wholly to the personal services of officers; as no proof was acknowledged relative to services done by their fathers or grandfathers, who might have retired from the army, or have died prior to the publication of the edict. The XVth or last Article was a sort of register, in which were preserved the different titles that enabled individuals to lay claim to military nobility. The whole of this edict may be seen, page 206, in the 8d volume "Des Elements Militaires." The French emperor Bonaparte instituted an order of nobility called the "Legion of Honor," the political influence of which appears to be greater than any order ever established, even than that of the Jesuits. He also adopted the ancient military title of duke, which was conferred only on men who had merited renown by their military greatness. The title of count was also established, and all the members of the Legion of Honor held a rank corresponding with the knights of feudal institution. Private soldiers and tradesmen, for acts of public virtue, have been created members of the Legion of Honor.

Noblesse Oblige. A French phrase,—rank has its obligations.

Nocera dei Pagani (anc. *Nuceria Alfa-*

terna). A town of Southern Italy, province and 8 miles northwest of Salerno. During the second Samnite war (315 B.C.) the Nucernians, who were on friendly terms with the Romans, were induced to abandon their alliance and make common cause with the Samnites, for which they were punished in 308 by the Roman consul Fabius, who invaded their territory, laid siege to their city, and compelled them to unqualified submission. In the second Punic war the city was besieged by Hannibal, and after a vigorous resistance was compelled by famine to surrender; it was given up to plunder and totally destroyed, while the surviving inhabitants took refuge in the other cities of Campania. It again became a flourishing town, and its territory was ravaged in the Social war, 90 B.C. The decisive battle between Narses and Teias, which put an end to the Gothic monarchy in Italy (538 A.D.), was fought in its neighborhood. Its modern appellation is derived from the circumstance that in the 13th century a body of Saracens were established there by the emperor Frederick II.

Nogent-le-Rotrou. A parish and town of France, in the department of the Eure and Loire, 83 miles southwest from Chartres. Taken by the English in 1428.

Nola. A city of Italy, province of Terra di Lavoro, 14 miles east-northeast of Naples. The ancient Nola was founded by the Ausonians, but afterwards fell into the hands of the Tyrrheni (Etruscans). In 327 B.C. it was sufficiently powerful to send 2000 soldiers to the assistance of Neapolis. In 318 the town was taken by the Romans. It remained faithful to the Romans even after the battle of Cannæ, when the other Campanian towns revolted to Hannibal; and in consequence retained its own constitution as an ally of the Romans. In the Social war it fell into the hands of the confederates, and when taken by Sulla it was burnt to the ground by the Samnite garrison.

Nolan's Range-finder. See **RANGE-FINDER**.

Nolle Prosequi (*Practice*). An entry made on the record of courts-martial, by which the prosecutor or plaintiff declares that he will proceed no further. The effect of a *nolle prosequi*, when obtained, is to put the defendant without day, but it does not operate as an acquittal; for he may be afterwards re-indicted, and even upon the same indictment fresh process may be awarded.

Nomenclature. Technical designation. For nomenclature of ordnance, see appropriate headings in this work.

Nominal. By name, hence *nominal call*, which corresponds with the French *appel nominatif*; and, in a military sense, with our roll-call.

Non-combatant. Any person connected with an army, or within the lines of an army, who does not make it his business to fight, as any one of the medical officers and their assistants, chaplains, and others, also any of

the citizens of a place occupied by an army; also, any one holding a similar position with respect to the navy.

Non-commissioned Officers (Fr. *sous-officiers*, Ger. *unter-offizieren*). Are the subordinate officers of the general staff, regiments, and companies who are appointed, not by commission, but by the secretary of war or commanding officers of regiments; and they are usually selected on account of good conduct or superior abilities.

Non-effective. Signifies men not fit or available for duty, in contradistinction to effective (which see).

Noose. A running knot, which binds the closer the more it is drawn.

Nootkas, or Ahts. The generic name of the Indians residing on Vancouver Island and the shore of the mainland along the sound of the same name. They are subdivided into many tribes and number about 14,000, some of whom are partially civilized.

Nora. A mountain fortress of Cappadocia, on the borders of Lycania, on the northern side of the Taurus, noted for the siege sustained in it by Eumenes against Antigonus for a whole winter.

Norba, or Norbanus (now *Norma*). A strongly fortified town in Latium, on the slope of the Volscian Mountains, and near the sources of the Nymphæus, originally belonged to the Latin and subsequently to the Volscian league. The Romans founded a colony at Norba in 492 B.C. It espoused the cause of Marius in the civil war, and was destroyed by fire by its own inhabitants when it was taken by one of Sulla's generals.

Nordlingen. A walled town of Bavaria, in the circle of Swabia, 48 miles southwest from Nuremberg. Here the Swedes under Count Horn were defeated by the Austrians, August 27, 1634; and the Austrians and allies by Turenne in 1645.

Noreia (now *Neumarkt*, in Styria, Austria). The ancient capital of the Taurisci, or Norici, in Noricum. It was situated in the centre of Noricum, a little south of the river Murus, and on the road from Virunum to Ovilaba. It is celebrated as the place where Carbo was defeated by the Cimbri, 113 B.C. It was besieged by the Boii in the time of Julius Cæsar.

Norfolk. A city and capital of Norfolk Co., Va., on the Elizabeth River, an arm of Chesapeake Bay, about 18 miles from Fortress Monroe, has a fine harbor, safe, commodious, and of sufficient depth to admit the largest vessels. It is the largest naval station in the United States. Its navy-yard was destroyed on April 21, 1861, by the Federals, to prevent the ships of war and naval stores that were there from being appropriated and used by the seceding States.

Noricum. A Roman province south of the Danube, was bounded on the north by the Danube, on the west by Rætia and Vindelicia, on the east by Pannonia, and on the south by Pannonia and Italy. Its inhabitants, the most important of which were

the Taurisci, also called Norici, were conquered by the Romans toward the end of the reign of Augustus, after the subjugation of Rætia by Tiberius and Drusus, and their country was formed into a Roman colony.

Normandy (Fr. *Normandie*). Formerly a province in the north of France, bordering on the English Channel; now divided into the departments of Seine-Inférieure, Eure, Orne, Calvados, and Manche. In the time of the Romans, the country bore the name of *Gallia Lugdunensis II*. Under the Frankish monarchs it formed a part of Neustria. From the beginning of the 9th century it was continually devastated by the Scandinavians, termed Northmen, or Normans, from whose irruptions Charles the Simple of France purchased immunity by ceding the duchy to their leader, Rollo, 905. Rollo, the first duke, and several of his successors held it as a fief of the crown of France, until William, the seventh duke, acquired England in 1066; it was reunited to France in 1204; was reconquered by Henry V. 1418, and held by England partially till 1450.

Normans (the Northmen). Toward the end of the 8th century Western Europe began to be scourged by the inroads of Scandinavian pirates, known to the inhabitants of the British Isles as "East-men" and "Danes,"—to those of the continent as "North-men." These Northmen were of Germanic stock, a vigorous, seafaring race, not yet Christianized, peopling the coasts of the Baltic and of the two peninsulas which form the Norway and Sweden and the Denmark of to-day. Need and the national thirst for adventure and for strife drove forth from the thickening population, down upon the sunnier, richer, weaker South, swarms of vikings,—i.e. warriors,—who scourged the coasts of England, Germany, and France, pressed with their small, sharp, open vessels up the narrowest streams, burned, slew, and plundered, and sailed away laden with booty and with slaves. About the middle of the 9th century these raids began to assume an altogether new character and importance. The consolidation of the three great Scandinavian kingdoms broke the power of the petty kinglets and independent nobles, and drove many a jarl forth with his followers to seek a freer life in some new home. Northmen threw themselves in larger bands upon England, which the Wessex kings had not yet fairly centralized; upon the Frankish kingdoms, fast falling asunder under the later Karlings; harried the country, besieged and sacked the cities, wintered at the mouths of the rivers, and by the end of the century had wrested from Alfred half his kingdom, and begun to plant colonies on the coasts of France. Northmen ravaged Spain and the shores of the Mediterranean, fell upon Western Italy, penetrated Greece and Asia Minor, and there met others of their countrymen, who had pressed down through Russia. For in the Russia of that day, under the name of Verangians, Northmen had become the rul-

ing class, a military aristocracy; while those who made their way still farther south had formed the famous Varangian body-guard of the Byzantine emperors, which maintained its existence and its distinctive character for five centuries. During the latter half of the 9th century, also, Scandinavians, sailing westward, found and settled Iceland. With the establishment, early in the 10th century, of settlements upon the continent, with the occupation Scandinavian energy now found at home in wars between the three new kingdoms, and with the gradual triumph of Christianity in the North, Europe gained, at last, comparative rest. England's period of misery and humiliation under Ethelred the Unready (979-1016), ended by the establishment of a Danish dynasty (1017-42), marks the last great outburst of the pent-up heathenism.

Northallerton. A town of Yorkshire, England, 81 miles northwest from York. Near here was fought the "battle of the Standard," where the English under the Earls of Albemarle and Ferrers totally defeated the Scotch armies, August 22, 1138. The archbishop of York brought forth a consecrated standard on a carriage at the moment when they were hotly pressed by the invaders, headed by King David.

Northampton. The chief town of Northamptonshire, situated on the Nen, or Nene, 60 miles northwest from London. It was held by the Danes at the beginning of the 10th century, and was burnt by them in 1010. Its castle was besieged by the barons in 1215, during the civil wars of King John. On July 10, 1460, a conflict took place between the Duke of York and Henry VI. of England, in which the king was defeated, and made prisoner (the second time) after a sanguinary fight which took place in the meadows below the town. It was seized and fortified by the Parliamentary forces in 1642. On March 30, 1645, Cromwell marched from it with 1500 horse and two regiments of foot to Rugby. After the restoration, October 17, 1661, the walls of Northampton were demolished, it having taken the side of the Parliament.

North Carolina. One of the Southern Atlantic States, and one of the original thirteen of the American Confederacy. Attempts were made under the auspices of Sir Walter Raleigh to settle North Carolina as early as between 1585 and 1589, but in one year after no trace of the colony could be found. The first permanent settlement was made on the banks of the Roanoke and Chowan, by some emigrants from Virginia, in 1653. John Culpepper rebelled against the arbitrary government of Miller in 1678, and held the government for two years. In 1693, North and South Carolina were separated. In 1711 the Tuscaroras, Corees, and other savages attacked and massacred 112 settlers, principally of the Roanoke and Chowan settlements; but the following year the united forces of the two Carolinas com-

pletely routed them, killing 300 savages. In 1729 the proprietors sold their rights to the crown. A party of malcontents, in 1771, rose against the royal governor, but after two hours' contest, fled with considerable loss. A severe conflict with the Northwest Indians occurred in 1774, on the Kanawha River, which resulted in the abandonment of the ground by the savages. North Carolina took an early and active part in the events of the Revolution, and within her borders took place sanguinary conflicts at Guilford Court-house, Brier Creek Springs, Fishing Creek, and other places. The Mecklenburg Declaration of Independence was made May 20, 1776: so North Carolina has the honor to have first proposed a separation from Great Britain. In the second war with Great Britain she also played a prominent part, although she had no serious losses on her territory. During the late civil war North Carolina suffered greatly, and was the scene of many important engagements, among which were the capture of Forts Hatteras and Clark in 1861, Roanoke Island and Newbern in February, 1862, and Fort Fisher in January, 1865. In March, 1865, the battles of Averysboro' and Bentonville were fought by the armies of Gen. Sherman and J. E. Johnston, which ended in the final surrender of the latter, at Durham Station, April 26, 1865.

Norwich. A city of England, and the capital of the county of Norfolk, on the river Wensum, 108 miles from London. In 1549 the city was the scene of an insurrection resembling that of the Jacquerie in France and the Peasant's war in Germany. The poor objected to the inclosure of certain commons and waste lands in the neighborhood of Attleborough and Wymondham; fences were thrown down; Robert, *alias* Knight, a tanner, a bold and resolute man, headed the rebels, aided by his brother William, a butcher. Their numbers increased, and, marching towards Norwich, they encamped on Mousehold Heath, took possession of the mansion of the Earl of Surrey, and thence proceeded to lay siege to the city. Having augmented their number to 16,000, and strongly fortified their camp, they summoned the city to surrender. For months they maintained hostilities, and the country round was pillaged and laid waste, until at length they gained an entrance to the city. A strong force was sent down for the defense of the city, under the Marquis of Northampton, who was defeated on St. Martin's Palace plain; the rebels plundered and set fire to the city in many parts. The Earl of Warwick, assisted by his son Robert Dudley, earl of Leicester, was then sent to the relief of the citizens. The city was stormed by the king's troops, and the rebels forced to retreat after a two days' sharp conflict, during which upwards of 8000 were killed, and the insurgents subdued. About 800 of the ringleaders, including the two Ketts, were executed.

Nose-bag. A bag of stout canvas with a leather bottom, and straps by which it can be hung over a horse's head. It is used for feeding grain to horses out of stables.

Note. A brief writing intended to assist the memory. Members of courts-martial sometimes take notes. They are frequently necessary to enable a member to bring the whole body of evidence into a connected view, where the case is complex.

Noted. Well known by reputation or report; celebrated; as, a noted commander.

Nottingham. A large town of England, the capital of the county of the same name, 13 miles northeast from Derby. The castle here was defended by the Danes against King Alfred, and his brother Ethelred, who retook it, 868. William the Conqueror erected a castle, and constructed fortifications so strong as to render the place impregnable against any of the methods of attack which were then known. The castle of Nottingham, defended by the royalists, was besieged by the Parliamentary forces under the command of Col. Hutchinson, to whom, after a brave defense, it at length surrendered.

Nottoways. A tribe of Indians who formerly resided in Virginia on the river of the same name. As a distinct race they have ceased to exist.

Novara. A city of Northern Italy, defended by a castle, 53 miles west from Turin. In 1849 the Sardinians were disastrously defeated here by the Austrians; and in 1869 a French corps occupied the town.

Nova Scotia. A province of British North America, connected with New Brunswick by a narrow isthmus lying between Chignecto and Varte Bays. This country was discovered by Cabot in 1497; it was subsequently settled by the French; and came into the possession of the English in 1768.

Novi. A town of Northern Italy, situated at the foot of the Apennines, 13 miles southeast from Alessandria. It is noted for a sanguinary battle fought here in August, 1799, between the French under Joubert and the allied Austro-Russian forces under Suwarrow. The former were defeated, and among 10,000 of the French slain were Joubert and several other distinguished officers.

Noyan (Fr.). In English *mandril*; it also means the whole of the vacant space or bore of a cannon, under which are comprehended the diameter of the mouth, the vacant cylinder, the breech, and the vent. With respect to bombs, grenades, and hollow balls, that which is called *noyan* consists of a globular piece of earth, upon which the cover of bombs, grenades, and hollow balls is cast. The metal is poured in between this cover and the noyan, after which the noyan, or core, is broken, and the earth taken out.

Nubia. A large country of Africa, the ancient *Ethiopia supra Egyptum*, said to have been the site of the kingdom of Meroë, received its name from a tribe named Nubes

or Nabates. It is now subject to the viceroy of Egypt, having been conquered by Ibrahim Pasha in 1822.

Nuddea. A town of British India, in the district of Burdwan, 80 miles north of Calcutta. It was taken and entirely destroyed in 1204.

Nuggar. A term in the East Indies for a fort.

Nuits. A small fortified town near Dijon, in Burgundy, Northeast France. It was frequently captured and ravaged, especially in 1669, 1676, and 1686. It was taken by the Badenese under Von Werder, December 18, 1870, after five hours' conflict, in which above 1000 French are said to have been killed and wounded, and 700 prisoners taken. The German loss was also heavy. A depot of arms and ammunition was gained by the victors.

Numantia. The chief town of the Celtiberian people, called Arevaci, in ancient Spain, was situated on the Douro, in Old Castile, and is celebrated for the long war of twenty years which it maintained against the Romans. See NUMANTINE WAR.

Numantine War. The war between the Romans and the Celtiberians (Celts who possessed the country near the Iber, now *Ebro*) began 148 B.C., on account of the latter having given refuge to their allies, the Sigidiens, who had been defeated by the Romans. Numantia, an unprotected city, withstood a long siege, in which the army of Scipio Africanus, 60,000 men, was opposed by no more than 4000 men able to bear arms. The Numantines fed upon horse-flesh, and on their own dead, and at last drew lots to kill one another. At length, those whom plague and famine had spared destroyed themselves, so that no one remained to adorn the triumph of the conqueror, 133 B.C.

Numéros (Fr.). Round pieces of brass or other metal, which were numbered and used in the old French service in the detail of guards.

Numidia. An ancient country of North Africa, the seat of the war of the Romans with Jugurtha, which began 111 B.C., and ended with his subjugation and captivity, 106. The last king, Juba, joined Cato, and was killed at the battle of Thapsus, 46 B.C., when Numidia became a Roman province.

Nuncio. An ambassador from the pope.

Nuremberg (Ger. Nürnberg). A town of Bavaria, in the circle of Middle Franconia, stands on the Pegnitz, an affluent of the Regnitz. In 1219 it became a free city, independent of any European power, and as such it continued till it was given over by Napoleon in 1806 to the king of Bavaria. At the Reformation the inhabitants embraced the Protestant cause; and in the Thirty Years' War they were on the side of the Swedes, and suffered much in 1632, during the blockade which Gustavus Adolphus endured from the imperial forces under Wallenstein. The city was occupied by the

Prussians in 1866, and its fortifications demolished.

Nurse. A person whose whole business is to attend the sick in hospital. In the U. S. service, nurses are detailed in post hospitals from the companies who are serving at the post, and are exempt from other duty, but have to attend the parades for weekly inspections and the musters of their companies, unless especially excused by the commanding officer. Ordinarily one nurse is allowed to every ten persons sick in hospital. In the British service there are sergeants, orderly men, and nurses (generally women) in hospitals of regiments of the line.

Nuthall's Rifle. See SMALL-ARMS.

Nyköping. A seaport of Sweden, pleasantly situated on the Baltic, about 60 miles southwest of Stockholm. In 1817 the castle of Nyköping was seized and sacked by the people, who demolished its keep and donjons. In 1719 the town was taken and dismantled by the Russians.

Nystadt. A town of Finland, on the eastern coast of the Gulf of Bothnia, 50 miles south of Biorneborg. Here, in 1721, a treaty was agreed to between Russia and Sweden, by virtue of which all the conquests of Peter the Great along the coasts of the Gulf of Finland were annexed to Russia.

O.

Oakum. A tangled mass of tarred hempen fibres, is made from old rope by untwisting the strands and rubbing the fibres free from each other. Its principal use is in calking the seams between planks, the space round rivets, bolts, etc., for the purpose of preventing water from penetrating.

Oaths, Military. The taking of the oath of fidelity to government and obedience to superior officers, was, among ancient armies, a very solemn affair. A whole corps took the oath together, and sometimes an entire army. The tribunes of every legion chose out one whom they thought the fittest person, and gave him a solemn oath at large, the substance of which was, that he should oblige himself to obey the commanders in all things to the utmost of his power, be ready to attend whenever they ordered his appearance, and never to leave the army but by their consent. After he had ended, the whole legion, passing one by one, every man, in short, swore to the same effect, crying, as he went by, *Idem in me*, "the same by me." In modern times when so many other checks are used in maintaining discipline, the oath has become little more than a form. A recruit enlisting in the army or navy, or a volunteer enrolling himself, swears to be faithful to the government, and obedient to all or any of his superior officers. The members of a court-martial take an oath to try the cases brought before them justly, according to the evidence, to keep secret the finding and sentence of the court, until they shall be published by the proper authority, and to keep secret the votes or opinions given by the members individually. The judge-advocate swears that he will not reveal the individual opinions or votes of the members nor the sentence of the court to any but the proper authority. There is also an oath for the

members and an oath for the recorder of a court of inquiry. The only other military oath is the common oath of a witness before a court-martial, to tell the truth, the whole truth, and nothing but the truth. See APPENDIX, ARTICLES OF WAR.

Obedience (*Fr. obéissance*). Submission to the orders of a superior. The first principle which ought to be inculcated and impressed upon the mind of every officer and soldier is obedience to all lawful commands. It is the mainspring, the soul and essence of military duty. It is evident that if all officers and soldiers are to judge when an order is lawful and when not, the capacious and mutinous would never be at loss for a plea to justify their insubordination. It is, therefore, an established principle, that unless an order is so manifestly against law that the question does not admit of dispute, the order must first be obeyed by the inferior, and he must subsequently seek such redress against his superior as the laws allow. If the inferior disputes the legality before obedience, error of judgment is never admitted in mitigation of the offense. The redress now afforded by the laws to inferiors is not, however, sufficient; for doubtful questions of the construction of statutes, instead of being referred to the Federal courts of law for their true exposition, have received variable expositions from the executive, and left the army in an unfortunate state of uncertainty as to the true meaning of certain laws; and this uncertainty has been most unfavorable to discipline. Again, while the punishment of death is meted to officers and soldiers for disobedience of *lawful* commands, the law does not protect officers and soldiers for obeying *unlawful* commands. Instances have occurred in the United States, where officers and soldiers have been subjected to vexatious

prosecutions, simply for obeying orders according to their oath of office. Would it not be just if the law, instead of requiring officers and soldiers thus nicely to steer between Scylla and Charybdis, should hold the superior who gives an illegal order alone responsible for its execution?

Obedience to Orders. An unequivocal performance of the several duties which are directed to be discharged by military men. All officers and soldiers are to pay obedience to the lawful orders of their superior officers.

Obey, To. In a military sense, is without question or hesitation to conform assentively to all orders and instructions which are legally issued. It sometimes happens that individuals are called upon (by mistake, or from the exigency of the service) out of what is called the regular roster. In either case they must cheerfully obey, and after they have performed their duty they may remonstrate.

Obidos. A town of Portugal, in the province of Estremadura, situated on the Amaya, 45 miles northwest from Lisbon. An engagement took place here between the French and English in 1808.

Object. A word in military movements and evolutions, synonymous with *point*. Thus, in marching forward in line, etc., the guide of a squad, company, or battalion, must take two objects at least to fix his line of march by which the whole body is regulated. As he advances he selects succession objects or points to prolong the line.

Object. The mark aimed at in the fire of small-arms or artillery.

Objective-points. The point to be reached or gained by an army in executing a movement, has been termed the "objective-point." There are two classes of objectives, viz., *natural* and *accidental*. The term *geographical* is frequently used to designate the first of these.

A *natural objective* may be an important position, strong naturally, or made so by fortifications, the possession of which gives control over a tract of country, and furnishes good points of support or good lines of defense for other military operations. Or, it may be a great business centre, or a capital of a country, the possession of which has the effect of discouraging the enemy and making him willing to sue for peace.

Accidental objectives are dependent upon the military operations which have for their object the destruction or disintegration of the enemy's forces. These objectives are sometimes called "*objective-points of manoeuvre*." The position of the enemy determines their location. Thus, if the enemy's forces are greatly scattered, or his front much extended, the central point of his position would be a good objective-point, since the possession of it would divide the enemy's forces, and allow his detachments to be attacked separately. Or, if the enemy has his forces well supported, a good objective

would be on that flank, the possession of which would allow his communications with his base to be threatened. It is well to remark that the term "*point*" used in this connection is not to be considered merely in its geometrical sense, but is used to apply to the object which the army desires to attain, whether it be a position, a place, a line, or even a section of country.—*Prof. J. B. Wheeler.*

Oblat (Fr.). Disabled soldier formerly maintained by abbeyes.

Oblique. In tactics, indicates a direction which is neither parallel nor perpendicular to the front, but more or less diagonal. It is a command of warning in the tactics for the movement. It is used in referring to diagonal alignments, attacks, orders of battles, squares against cavalry, changes of front, fires, etc.

Oblique Deployments. When the component parts of a column that is extending into line, deviate to the right or left, for the purpose of taking up an oblique position, its movements are called *oblique* deployments.

Oblique Fire. See FIRE, OBLIQUE.

Oblique Flank. See FLANK, OBLIQUE.

Oblique Order of Battle. See ORDER OF BATTLE, OBLIQUE.

Oblique Percussion. Is that wherein the striking body is not perpendicular to the body struck, or is not in line with its centre of gravity.

Oblique Position. Is a position taken in an oblique direction from the original line of formation.

Oblique Projection. Is that wherein the direction of the striking body is not perpendicular to the body struck, which makes an oblique angle with the horizontal line.

Oblique Radius. Is a line extending from the centre to the exterior side of a polygon.

Oblique Step. Is a step or movement in marching, in which the soldier, while advancing, gradually takes ground to the right or left at an angle of about 25°. It is not now practiced.

Oblique, To. In a military sense, is to move forward to the right or left, by obliquing in either of those directions, according to the words of command.

Oblong Projectiles. See PROJECTILES.

Obsequies. See FUNERAL HONORS.

Observation, Army of. An army assigned to the duty of observing and checking the movements of an enemy.

Observer Sergeants. In the United States, are sergeants in the signal service, stationed in large towns and important commercial centres, to give timely warning of the approach of storms, rise of rivers, and all other important weather news for the guidance of merchants and others.

Observe, To. To watch closely, etc. Hence, *to observe* the motions of an enemy, is to keep a good lookout by means of small corps of armed men, or of intelligent and steady spies and scouts, and to be constantly

in possession of information regarding his different movements.

Obsession. The act of besieging.

Obseidional. Belonging to a siege.

Obseidional Crown (*Fr. couronne obseidionale*). A crown so called among the ancient Romans, which was bestowed upon a governor or general, who by his skill and exertions, either held out or caused the siege to be raised of any town belonging to the republic. It was made from the grass which grew on the spot, and was therefore called *gramineus* (*Lat. graminen*, "grass").

Obseidionale Monnaie (*Fr.*). Any substitute for coin which has a value put upon it that is greater than its intrinsic worth; and a currency given to answer the convenience of the inhabitants of a besieged place.

Obstacles. Are narrow passes, woods, bridges, or any other impediments which present themselves when a battalion is marching to front or rear; or abatis, crow's-feet, palisades, etc., which, being placed in the glacis of a fortress, obstruct the operations of an assaulting party.

Obstinate. In a military sense, means determined; fixed in resolution; as, an obstinate resistance.

Obstruct. To block up; to stop up or close, as a way or passage; to fill with obstacles or impediments that prevent passing; as, to obstruct a road, highway, channel, etc.

Obstruction. The act of obstructing, or the state of being obstructed. Also, that which obstructs or impedes; obstacle; impediment; hindrance.

Obtain. To get hold of by effort; to gain possession of.

Obuse, or Obusier (*Fr.*). A species of small mortar, resembling a mortar in everything but the carriage, which was made in the form of that belonging to a gun, only shorter. It has been frequently used at sieges; and was well calculated to sweep the covert way, and to fire ricochet shots. They were usually loaded with cartouches.

Obusier (*Fr.*). Howitzer, called *Ambitz* by the Dutch. In 1484 it was known under the name of *Ausenice*.

Oc. A Turkish arrow.

Ocana. A town of Spain, in New Castile, 33 miles southeast from Madrid. Near here the Spaniards were defeated by the French, commanded by Mortier and Soult, November 19, 1809.

Occasion (*Fr.*). Has the same significance in military matters that *affair* bears among the French. *Une occasion bien chaude*, a warm contest, battle, or engagement; it further means, as with us, the source from whence consequences ensue. *Les malheurs du peuple sont arrivés à l'occasion de la guerre*, "the misfortunes of the people have been occasioned by the war," or "the war has been the occasion of the people's misfortunes." The French make a nice distinction which may hold good in our language, between cause and occasion, viz. :

Il n'en est pas la cause,—il n'en est que l'occasion, l'occasion innocente.—"He is not the cause, he is only the occasion, the innocent occasion of it."

Occupation. The state of occupying or taking possession. Also, the state of being occupied or possessed; possession.

Occupation, Army of. An army which invades an enemy's country and establishes itself in it either temporarily or permanently, is termed an *army of occupation*.

Occupy. Is a military phrase for taking possession of a work or fort, or to remain stationary in any place.

Octagon. A figure or polygon that has eight equal sides, which likewise form eight equal angles. The octagon in fortification is well calculated in its ground for the construction of large towns, or for such as have the advantage of neighboring rivers, especially if the engineer can so place the bastions, that the entrances and outlets of the rivers may be in some of the curtains. By means of this disposition no person could come in or go out of the garrison without the commandant's permission, as the sentinels must have a full view from the flanks of the neighboring bastions.

Ocsakov, or Otschakov. A town of Russia in Europe, in the government of Cherson, near the mouth of the Dnieper. This place was once the object of obstinate contests between the Turks and Russians.

Oda. The different corps or companies into which the Janissaries were divided bore this appellation. The word itself means a room, and the companies were so called from meeting separately.

Oda-Bachi. Captain superintending the gunners at Constantinople.

Odas. Company of soldiers.

Odessa. A fortified seaport of European Russia, in the government of Cherson, on a small bay of the Black Sea between the Dniester and Dnieper, 85 miles west from Kherson. In the beginning of the 15th century the Turks constructed a fortress here, which was taken by the Russians in 1789. On the outbreak of the Crimean war, April, 1854, the British steamer "Furious" went to Odessa for the purpose of bringing away the British consul. While under a flag of truce, she was fired upon by the batteries of the city. On the failure of the written message from the admiral in command of the fleet to obtain explanations, 12 war-steamer's invested Odessa, April 22, and in a few hours destroyed the fortifications, blew up the powder-magazines, and took a number of Russian vessels. On May 12, the English frigate "Tiger" stranded here, and was destroyed by Russian artillery. The captain, Giffard, and many of his men were killed, and the rest made prisoners.

Odius. A herald in the camp of the Greeks before Troy.

Odometer. An instrument attached to the wheel of a carriage to measure distances in traveling, indicating on a dial

the number of revolutions made by the wheel.

Odryæe. The most powerful people in Thrace, dwelt, according to Herodotus, on both sides of the river Artiscus, a tributary of the Hebrus, but also spread farther west over the whole plain of the Hebrus. Their king Teres retained his independence of the Persians 608 B.C. Sitalces, his son, enlarged his dominions, and in 429 aided the Athenians against Perdiccas II. of Macedonia with an army of 150,000 men. Sitalces was killed in battle with the Triballi, 424. Cotys, another king (362-363), disputed the possession of the Thracian Chersonesus with Athens; after nine or ten years' warfare, Philip II. of Macedonia reduced the Odryæe to tributaries.

Eniades (now *Trigardon*, or *Trikardo*). An ancient town of Acarnania, situated on the Acheous, near its mouth. Eniades espoused the cause of the Spartans in the Peloponnesian war. At the time of Alexander the Great, the town was taken by the Ætolians, who expelled the inhabitants; but the Ætolians were expelled in their turn by Philip V., king of Macedonia, who surrounded the place with fortifications. The Romans captured and restored the town to the Acarnanians 211 B.C.

Enophyta (now *Ivis*). A town in Bœotia, on the left bank of the Asopus, and on the road from Tanagra to Oropus, memorable for the victory gained here by the Athenians over the Bœotians, 466 B.C.

Oesel. An island belonging to Russia, stretches across the mouth of the Gulf of Riga. It at one time belonged to the Teutonic knights, but was seized by the Danes at an early period, and ceded by them to Sweden in 1645. In the beginning of the 18th century it was taken possession of by Russia, to which power it was finally ceded in 1721.

Ofanto (anc. *Aufidus*). A river of Naples, which rises in the province of Principato Ultra, and after a course of 76 miles flows into the Adriatic, 4 miles from Barletta. Near its mouth was fought the famous battle of Cannæ, in which the Romans were defeated by Hannibal.

Off, To Go. To be discharged, as a gun.

Off, To March. To quit the ground on which you are regularly drawn up, for the purpose of going upon detachment, relieving a guard, or doing any other military duty.

Off, To Tell. To count the men composing a battalion or company, so as to have them readily and distinctly thrown into such proportions as suit military movements or evolutions.

Offa's Dyke. An intrenchment from the Wye to the Dee, England, made by Offa, king of Mercia, to defend his country from the incursions of the Welsh, 779.

Offense, Weapons of. Those which are used in attack, in distinction from those of *defense*, which are used to repel.

Offenses. All acts that are contrary to

good order and discipline, omissions of duty, etc., may be called *military offenses*. The principal ones are specified in the Articles of War (which see). No officer or soldier can be tried twice for the same offense, unless in the case of an appeal; nor can any officer or soldier be tried for any offense committed more than two years before the date of the order for trial, unless in cases where through some manifest impediment the offenders were not amenable to justice in that period, when they may be brought to trial any time within two years after the impediment has ceased.

Offensive. Used in attack; assailant; opposed to *defensive*; as, an offensive weapon or engine. Making the first attack; assailant; invading; opposed to *defensive*; as, an offensive war.

Offensive and Defensive Fireworks. See **PIROBOMBY**.

Offensive and Defensive League. A league that requires both or all parties to make war together against a nation, and each party to defend the other in case of being attacked.

Offensive and Defensive Operations. Are operations the object of which is not only to prevent the enemy's advance, but to attack him whenever there is a favorable opportunity which promises success.

Offensive Fortification. See **FORTIFICATION**.

Offensive War. Military acts of aggression constitute what is called an *offensive war*. Those who assail an opposite or adverse army, or invade the dominions of another power, are said to wage an *offensive war*.

Office. Any place or department appointed for the officers and clerks to attend in, for the discharge of their respective employments; as, the adjutant-general's office, etc.

Office of Ordnance. See **BOARD OF ORDNANCE** and **ORDNANCE OFFICE**.

Officer, Brevet. See **BREVET**.

Officer, Field-. See **FIELD-OFFICER**.

Officer, General. See **GENERAL OFFICER**.

Officer in Waiting. In the British service, the officer next for duty is so called. He is also mentioned in orders, and ought to be ready for the service specified at a minute's warning. He must not on this account quit the camp, garrison, or cantonment.

Officer, Non-commissioned. See **NON-COMMISSIONED OFFICER**.

Officer of the Day. Is an officer whose immediate duty is to attend to the interior economy of the corps or garrison to which he belongs, or of those with which he may be doing duty. The officer of the day has charge of the guard, prisoners, and police of the garrison, inspects the soldiers' barracks, messes, hospital, etc.

Officer of the Guard. An officer detailed daily for service with the guard. It is his duty, under the officer of the day, to see that the non-commissioned officers and men

of his guard are well instructed in all their duties, he inspects the reliefs, visits the sentinels, is responsible for the prisoners and the property used by them and the guard; he is also responsible for good order, alertness, and discipline, and should never quit his guard duty unless properly relieved.

Officer, To. To furnish with officers; to appoint officers over.

Officers. Commissioned officers are all those officers of a government who receive their commissions from the executive, and are of various grades from the ensign to the marshal, all of which see under their respective headings. See **APPOINTING POWER** and **COMMISSIONS**.

Officers, Marine. All those who command in that body of troops employed in the sea service.

Officers, Staff. Are all these officers who are not attached to regiments, whose duties extend over the whole, or a large section, such as a brigade or a division; such as the adjutant-general, the quartermaster-general, etc., and their subordinates, together with brigade-majors and aides-de-camp. The regimental staff-officers are those who are not attached to companies; they are the adjutant and quartermaster, in the U. S. service, and in European armies the surgeon, paymaster, adjutant, assistant-surgeon, and quartermaster. See **STAFF**.

Officers, Subaltern. Are all those officers below the grade of captain.

Officers, Warrant. Are those who have no commissions, but only warrants from such boards or persons as are authorized by law to grant them. The only warrant-officers in the British service are master-gunners and schoolmasters. Technically the non-commissioned officers of the U. S. army are not warrant-officers, though they are appointed by warrants.

Official. All orders, reports, applications, memorials, etc., which pass through the regular channels of communication, are called official.

Official Courtesies. The interchange of official compliments and visits between foreign military or naval officers and the authorities of a military post are international in character. In all cases it is the duty of the commandant of a military post, without regard to his rank, to send a suitable officer to offer civilities and assistance to a vessel of war (foreign or otherwise) recently arrived. After such offer it is the duty of the commanding officer of the vessel to send a suitable officer to acknowledge such civilities, and request that a time be specified for his reception by the commanding officer of the post. The commanding officer of the post, after the usual offer of civilities, is always to receive the first visit without regard to rank. The return visit by the commanding officer of the military post is made the following day, or as soon thereafter as practicable.

When a military commander officially

visits a vessel of war he gives notice of his visit to the vessel previously thereto, or sends a suitable officer (or an orderly) to the gangway to announce his presence, if such notice has not been given. He is then received at the gangway by the commander of the vessel, and is accompanied there on leaving by the same officer. The officer who is sent with the customary offer of civilities is met at the gangway of a vessel of war by the officer of the deck; through the latter he is presented to the commander of the vessel, with whom it is his duty to communicate.

When a civil functionary entitled to a salute arrives at a military post, the commanding officer meets or calls upon him as soon as practicable. The commanding officer tenders a review, provided the garrison of the place is not less than four companies of troops. When an officer entitled to a salute visits a post within his own command, the troops are paraded and he receives the honor of a review, unless he directs otherwise. When a salute is to be given an officer junior to another present at a post, the senior will be notified to that effect by the commanding officer. Military or naval officers of whatever rank, arriving at a military post or station, are expected to call upon the commanding officer. Under no circumstances is the flag of a military post dipped by way of salute or compliment.

Officially. By the proper officer; by virtue of the proper authority; in pursuance of the special powers vested; as, accounts or reports officially verified or rendered; letters officially communicated; persons officially notified.

Off-reckonings. A specific account was so called which existed between the government and colonels of British regiments for the clothing of the men.

Ogee, or Ogive. In pieces of ordnance, an ornamental molding on guns, mortars, and howitzers.

Ogival. The form given the head of oblong projectiles. It was found by Borda that this shape experienced less resistance from the air than any other.

Ohio. One of the Western States of the American Confederacy, lying between Lakes Michigan, Erie, and the Ohio River. In 1680, La Salle explored the State, and built a military post on the Ohio, which the French claimed; but in 1763 they relinquished it. The first settlement was made subsequent to the Revolution, a company of New Englanders having settled at Marietta in April, 1788. The early inhabitants were much annoyed by incursions of the Indians, who had successively defeated Gens. Harmar and St. Clair (the latter with great slaughter of his troops, leaving scarcely one-fourth) in 1791 and 1792, but were themselves in turn utterly routed by Gen. Wayne in August, 1794. Ohio was admitted as a State in 1802. In the second war with Great Britain, Ohio suffered greatly from raids by the British and Indians. Fort Sandusky was attacked

by Gen. Proctor, with 500 regulars and as many Indians, and was successfully defended by Maj. Croghan, a youth of twenty-one years, with 160 men. But the most important action which occurred was the naval engagement on Lake Erie, fought at Put-in-Bay, September 10, 1813, in which Commodore O. H. Perry defeated a superior British fleet under command of Barclay. Ohio contributed greatly to the cause of the Union in the late civil war; she sent her full quotas of troops to the field, and the women attended to the sick and wounded with untiring zeal. The State was twice invaded by Confederate guerrillas, but suffered no material damage.

Oillets, or Oillets. Apertures for firing through in the walls of a fort.

Ojibways. See **CHIFFEWAS**.

Okanagans, or Cutsanim. A semi-civilized tribe of Indians who, to the number of about 300, reside to the east of the Cascade Mountains, in Washington Territory.

Olcades. An ancient people in Hispania Tarraconensis, north of Carthago Nova, nearer the sources of the Anas, in a part of the country afterwards inhabited by the Oretani. They are mentioned only in the wars of the Carthaginians with the inhabitants of Spain.

Oldensworth (Denmark). A conference was held here in 1713, between Peter the Great and Frederick IV. of Denmark.

Olifant, or Oliphant (Fr.). A horn which a paladin or knight sounded in token of defiance, or as a challenge.

Olinde. A sort of sword-blade.

Olivenza. A fortified town of Spain, in Estremadura, situated on the Guadiana, 16 miles southwest from Badajoz. This town was ceded by Portugal to Spain in 1801; and for having arranged this cession, Godoy received his title of "Prince of Peace." In 1811 it was taken by the French.

Olmütz. The chief fortress of Moravia, in the district of the same name, in Austria, 40 miles north-northeast from Brünn. Olmütz was taken by the Swedes during the Thirty Years' War; but was besieged in vain for seven weeks by Frederick the Great in 1758. Lafayette was confined here in 1794. A conference was held here November 29, 1860, under the czar Nicholas, when the difficulties between Austria and Prussia respecting the affairs of Hesse-Cassel were arranged.

Olot. A town of Spain, in the province of Gerona, 85 miles from Barcelona. It figured and suffered much in the war of independence, being a strong point, and passed alternately into the hands of French and Spaniards, until the latter dismantled the fortifications. In the civil war of 1866 and 1867 it was much coveted and frequently attacked by the Carlists, but unsuccessfully.

Olténitza. A fortified village of Turkey in Europe, in Wallachia, situated on the Danube, 2 miles north from Turtukai. A Turkish force having crossed the Danube

under Omar Pasha, established themselves at Olténitza in spite of the vigorous attacks of the Russians, who were repulsed with loss November 2-3, 1853. On November 4, a desperate attempt to dislodge the Turks by Gen. Danneberg with 9000 men, was defeated with great loss.

Olympic Games. Were instituted by Hercules A.M. 2856, in honor of Jupiter Olympus, at Olympia, a city of Elis, in Peloponnesus. They were celebrated about every four years, about the summer solstice. The design of them was to accustom the young military men to running, leaping, and every other military exercise.

Olynthus. A town of Chalcidice, stood at the head of the Toronaic Gulf, between the headlands of Sithonia and Pallene, about 60 stadia from Potidea. During the second Persian invasion of Greece, Artabazus, the general of Xerxes, captured the town, slaughtered its Bottisan inhabitants, and gave it to the Chalcidians. It was subdued in war by Sparta in 382-379 B.C. It resisted Philip of Macedon 360 B.C., by whom it was destroyed in 347.

Omagh (Irish, Oigh magh, "seat of the chiefs"). An ancient town, capital of the county of Tyrone, in Ireland, 84 miles south from Londonderry. Omagh grew up around an abbey founded in the year 792, but is first heard of as a fortress of Art O'Nial in the end of the 15th century, about which time it was forced to surrender to the English, although its possession long continued to alternate between Irish and English hands. It formed part of James I.'s "Plantation grants," and was strongly garrisoned by Mountjoy. On its being evacuated by the troops of James II. in 1689, it was partially burned.

Omaha Indians. A tribe of aborigines, of Dakota stock, who, to the number of 1000, inhabit a reservation in Nebraska. They are generally peaceful and industrious.

Omer, St. A fortified town of France, in the department of Pas-de-Calais, 24 miles southeast from Calais. This place was taken by Louis XIV. in 1677. It suffered severely during the revolution of 1830.

Omra, or Omhra (plural of ameer, a "lord") Ind. They were persons of considerable consequence in the dominions of the Great Mogul. Some of them had command of 1000 horse, others of 2000, and so on to 20,000; their pay being regulated according to their commands. The governors and great officers of state were generally chosen out of this body.

On. A preposition frequently used in military exercise. It precedes the word of command which directs the change or formation of bodies of men upon points that are fixed; as, form on the centre company.

On the Alert. In a state of vigilance or activity.

Onagre (Fr.). A warlike machine, which was used by the ancients to throw stones of different sizes. It is mentioned by Vegetius.

Oneidas. A tribe of Indians forming one of the Five Nations of the Iroquois Confederacy, who resided in the county and near the lake which bears their name. They were continually at war with the early French settlers in Canada, and took sides with the colonists against the British in the war of the Revolution. For this they suffered severely. Their castle, church, and villages were destroyed by the Tories in 1780, and they were compelled to flee to the white settlements for protection. In 1788 they ceded most of their lands to the State and moved to Canada; subsequently some of the tribe settled in Wisconsin, where they are still comfortably located on a reservation; and a remnant still resides near Rome, Oneida Co., N. Y. They are well advanced in the arts of civilization, and, contrary to the usual fate of Indian tribes, have increased in numbers.

Onein. An offensive weapon of mediæval times, consisting of a staff with a hooked iron head.

Onondagas. One of the confederate tribes of Indians known as the Five Nations. They resided in the State of New York, in the county which bears their name. They were long the enemies of the Canadian French, with whom, and with the Hurons, they were continually at war. They were allies of the English in the French war, 1756-63, fought against the colonists in the Revolutionary war, and suffered severely in the contest. In 1788 they ceded their lands to the State and moved to Ontario, Canada, where about 400 of them now reside.

Onset. A rushing or setting upon; a violent attack; assault; a storming; especially the assault of an army or body of troops upon an enemy or a fort.

Onsetting. A rushing upon or assaulting.

Onslaught. Attack; onset; aggression; assault. "By storm and onslaught to proceed."

Onward. Toward the point before or in front; forward; as, to move onward.

Oodeypoor, or Mewar. A Rajpoot state in India. It became tributary to the British government by the treaty of 1818. A corps of Bheels was raised in 1841 at the joint expense of the British and Oodeypoor governments, in order to reduce to subjection the Bheel districts of the country.

Oojein, or Oojain. A city of India, in the territory of Gwalior, 152 miles southwest from Goonah. It fell into the power of the Mohammedans in 1810. At this time it was the capital of Malwa; and along with this country it afterwards came under the power of the Patans, but was recovered by Akbar in 1561. In the middle of the 18th century it was conquered by the Mahrattas.

Opatas, or Yakis. An Indian people who reside in the state of Sonora, Mexico. They number about 25,000, and are generally peaceable and industrious.

Open. In military movements and dis-

positions, this term is frequently used in contradistinction to *close*; as, open column, open distance, open order, etc. It also constitutes part of a word of command; as, rear rank take open order. By *open distance* in *column* is meant that the intervals are always equal in depth to the extent in front of the different component parts of the column.

Open Flank. In fortification, is that part of the flank which is covered by the orillon.

Opening of Trenches. Is the first breaking of ground by the besiegers, in order to carry on their approaches towards the place.

Operations, Lines of. See **LINES OF OPERATIONS.**

Operations, Military. Consist in the resolute application of preconcerted measures in secrecy, dispatch, regular movements, occasional encampments, and desultory combats or pitched battles.

Opinion. In military proceedings that regard the interior government of an army, this word signifies decision, determination, judgment formed upon matters that have been laid before a court-martial or court of inquiry.

Opinion. Officers on courts-martial give their opinion by seniority, beginning with the youngest in rank.

Oporto. A city of Portugal, in the province of Entre-Douro-e-Minho, about 2 miles from the mouth of the Douro, and 175 miles north from Lisbon. It was attacked by the Moors under Abderrahman in 820. In 1092 certain knights of Gascony, commanded by Don Alfonso Fredrico, captured it from the Moors. It was famous for the strength of its fortifications during the Middle Ages, its walls being 8000 paces in circumference, 30 feet in height, and flanked with towers. From the 17th to the present century, Oporto has been the scene of an unusual number of popular insurrections. In 1806 it was taken by the French. The French, under Marshal Soult, were surprised here by Lord Wellington, and defeated in an action fought May 11, 1809. It was besieged in 1832 and 1833 by Dom Miguel, and successfully defended by Dom Pedro with 7500 men. In this siege, the city suffered severely, and more than 16,000 of the inhabitants were killed. It has since been the scene of civil war. The insurgents entered Oporto January 7, 1847; a Spanish force entered Oporto, and the Junta capitulated, June 26, 1847.

Oppenheim. A town of the grand duchy of Hesse-Darmstadt, on the left bank of the Rhine, 10 miles southeast of Mayence. It occupies the site of the Roman castle of *Bauconia*, and was made a royal palatinate under the Carolingians. It afterwards became one of the most important free towns of the empire. It was taken in 1218 by Adalbert, archbishop of Mayence, in 1620 by the Spaniards, in 1631 by the Swedes under Gustavus Adolphus, and in 1634 by the Imperialists, suffering much upon all these occasions. In 1689 the French under Melac almost entirely destroyed it.

Opponent. One who opposes, or opposes; an adversary; an antagonist; a foe.

Oppose. To act as an adversary against another; to resist, etc. It likewise signifies to place as an obstacle.

Oppugn. To fight against, whether in attack, resistance, or simple opposition; to attack; to oppose; to resist.

Oppugnant. Tending to awaken hostility; hostile; opposing.

Or. In heraldry the metal gold, represented in heraldic engravings by an unlimited number of dots.

Oran. A seaport town of Algeria, about 220 miles west-southwest of Algiers; it is defended by strongly armed forts. The town of Oran was built by the Moors. It was taken by the Spaniards in 1509, by the Turks in 1708, and again by the Spaniards in 1782. It was taken by the French in 1881, and has since remained in their hands.

Orb. In tactics, is the disposing of a number of soldiers in circular form of defense. The orb has been thought of consequence enough to employ the attention of the famous Marshal de Puysegur, in his "Art of War," who prefers this position to throw a body of infantry in an open country to resist cavalry, or even a superior force of infantry; because it is regular, and equally strong, and gives an enemy no reason to expect better success by attacking one place than another. Caesar drew up his whole army in this form when he fought against Labienus. The whole army of the Gauls was formed into an orb, under the command of Sabinus and Cotta, when fighting against the Romans. The orb was generally formed six deep.

Orchomenus. A city of Boeotia, and the capital of the powerful tribe of the Minyae, was situated near the western shore of Lake Copaic, on a hill which overlooked the windings of the Cephissus. Its original inhabitants are said to have been Thessalian emigrants, and its name was derived from Orchomenus, one of the kings of the Minyans. Homer compares its treasures to those of Egyptian Thebes, and tells us that it sent 80 ships to the Trojan war. Some time after this event it became a member of the Boeotian confederacy. During the Persian war, like the other towns of Boeotia, it abandoned the national cause. Its government was thoroughly aristocratic, and after the Peloponnesian war, when Thebes became a democracy, Orchomenus took part with Sparta, and shared in its first triumph over Thebes; but the victory of Epaminondas at Leuctra (371 B.C.) placed it at the mercy of the Thebans, who soon after destroyed it by fire, and sold its inhabitants as slaves. It was again rebuilt during the Phocian war, but was a second time destroyed in the reign of Philip of Macedon, who, however, once more rebuilt it; but it never again became prominent in history. The site is now occupied by the modern village of Skripú.

Orchomenus. An ancient city of Arcadia, stood in a plain surrounded by hills, which separated its territory from that of Mantinea on the south and those of Pheneus and Stymphalus on the north. Its founder is said to have been Orchomenus, the son of Lycaon, and several of its kings are said to have spread their rule over all Arcadia. During the Peloponnesian war, when its acropolis had fallen into ruins, and its last king, Pisiastus, had been murdered by an oligarchical faction, Orchomenus began to decline. About 867 B.C. three of its tributary towns were depopulated to furnish inhabitants to the newly-founded city of Megalopolis; in 818 B.C. it was taken by the Macedonian general Cassander; and ever afterwards it continued to be bandied about between different belligerent powers. At the time of Pausanias it was still inhabited, and at the present day its ruins are seen near the village of Kalpáki.

Order. This term, considered in its relation to the army, embraces divers subjects. It gives an idea of harmony in the accomplishment of duties; a classification of corps or men; injunctions emanating from authority; measures which regulate service, and many tactical details. In tactics, the natural order is when troops coming upon ordinary ground are ranged in line of battle by the prescribed tactical means, and when they are formed in column, right in front. The *oblique order* is contradistinguished from the parallel, and in general means every tactical combination, the aim of which is to produce an effect upon two points of an enemy's line by bringing a superior force to bear down on these two points. Such combinations constitute the *oblique order*, whatever manoeuvres may be used to accomplish the object. The *parallel order* operates, on the contrary, against the whole front of an enemy. Turanne and Condé fought habitually in parallel order, although they sometimes made a skillful use of oblique attacks. Guibert well says that a contiguous and regular parallel order can be of no use in war.

Order Arms. A word of command directing that the musket be brought down to the right side of the soldier, the butt resting on the ground.

Order, Beating. In the British service, is an authority given to an individual empowering him to raise men by beat of drum for any particular regiment, or for general service. It consists of a warrant which is signed by the secretary at war, or issued in his name by the adjutant-general.

Order Book. Every company in the service has such a book, in which orders are written for the information of officers and men. Order books are also kept at all military headquarters.

Order, Close. In tactics, comprehends space of about one-half pace between ranks.

Order, Entire. When applied to rank, means a straight line composed of half-files.

Order, Extended. Is preparatory to rank

entire, and is frequently practiced in light infantry manoeuvres. It comprehends the opening of files of a battalion or company standing two deep, so as to have just space enough for one man between each two. The battalion or company, after it has obtained all its relative distances and been halted, is fronted, and each rear rank man springs into the vacancy when the word of command is given.

Order of Alcantara. A Spanish military order. It was established by Ferdinand II., king of Leon and Castile, in 1170. The knights wore a green cross upon their garments. See **ALCANTARA**.

Order of Amaranth. An order of military knighthood, instituted in Sweden by Queen Christina in 1645, at the close of an annual feast celebrated in that country, and called *wirtschaft*. Their device was the cipher of *amarante*, composed of two A's, the one erect, the other inverted, and interwoven together; the whole inclosed by a laurel crown, with the motto, *Dolce nella memoria*.

Order of Argonauts of St. Nicholas. Was the name of a military order instituted by Charles III., king of Naples, in 1382, for the advancement of navigation, or, as some authors say, merely for preserving amity among the nobles. They wore a collar of shells inclosed in a silver crescent, from which hung a ship with the device, *Non credo tempori*.

Order of Battle. The arrangement or disposition of the different component parts of an army in one or more lines, according to the nature of the ground, for the purpose of engaging an enemy by giving or receiving an attack, or in order to be reviewed, etc.

Order of Battle, Concave. If the attack is made simultaneously on both wings, and the centre is refused, it is plain that the attacking army will assume a line of battle which will be concave towards the enemy's line.

Order of Battle, Convex. If the attack is made in the centre of the enemy's line, refusing both wings, the general direction of the line of battle of the attacking army will be convex towards the enemy's line, and the term "*convex order of battle*" is applied to it. Other orders of battle are named by military writers. Their names will generally describe the direction of the hostile lines of battle and the particular formation adopted by the attacking army.

Order of Battle, Oblique. An arrangement of an army for battle with one wing advanced beyond the other, or a movement which brings the line in contact with an enemy's flank; in general, any combination which brings a preponderating force upon any point of the enemy's line. See **ORDER**.

Order of Calatrava. See **CALATRAVA**, **ORDER OF**.

Order of Knights of St. Stephen. Instituted in 1561, by Cosmo, duke of Florence. They wear a red cross with a border of gold.

Order of Knights of the Band. Instituted by Alphonso, king of Spain, in 1268. Their name proceeded from the knights wearing a red scarf, or lace of silk, the breadth of 8 inches, which hung on their left shoulder.

Order of Knights of the Bath. A military order in Great Britain, deriving its name from the ceremony of bathing, which was performed at the initiation of the knights. The earliest authentic instance of this ceremony was at the coronation of Henry IV. (1399). The last occasion on which this ceremony was used was the coronation of Charles II., in 1660, after which the order fell into oblivion until it was revived by George I., in 1726. It is now the second in rank among the orders of England, the order of the Garter being the highest. The order of the Bath comprises three classes: first class, Knights Grand Cross (K.G.C.), the number of whom is limited to 50 military men and 25 civilians, besides the royal family; second class, Knights Commanders (K.C.B.), = 102 military and 50 civil; these and the first have the title of Sir; third class, Companions (C.B.), = 525 military and 200 civil.

Order of Knights of the Redemption. Instituted in the kingdom of Aragon by King James, who conquered the island of Majorca, in 1212. Their garments are white, with a black cross thereon.

Order of Knights Templar. See **TEMPLAR**, **KNIGHTS**.

Order of Maria Theresa. This order was instituted in June, 1757, by the empress queen of Hungary. In 1765 an intermediate class, styled knights commanders, was added to the two classes that originally composed the order.

Order of Merit. Instituted by Frederick III., king of Prussia, as a reward to those officers whose behavior deserved some marks of distinction. The ensign of this order is a golden star of eight rays, enameled with blue, which is worn appendant to a black ribbon edged with silver. The motto is *Pour le merite*.

Order of Mount Carmel. Instituted by Henry IV. in 1606.

Order of St. Alexander Newski. Or the Red Ribbon, which was instituted by Peter I., emperor of Russia; but the czarina Catherine I. conferred it in 1725.

Order of St. Hubert. See **HUBERT**, **ST.**, **ORDER OF**.

Order of St. James. See **JAMES OF THE SWORD**, **ST.**

Order of St. Lazarus. See **LAZARUS**.

Order of St. Louis. See **LOUIS**.

Order of St. Mark. See **MARK**, **ST.**, **KNIGHTS OF**.

Order of St. Michael. Instituted in 1469 by Louis XII. in honor of the important services done to France by that archangel at the siege of Orleans, where he is supposed to have appeared at the head of the French troops, disputing the passage of a bridge,

and to have repulsed the attack of the English, whose affairs ever after declined in that kingdom. The order is a rich collar, with the image of that saint pendent thereto; with the inscription, *Immensi tremor oceani*.

Order of St. Michael and St. George. This order of knighthood, founded for the Ionian Isles and Malta, April 27, 1818, was reorganized in March, 1869, in order to admit servants of the crown of England connected with the colonies.

Order of St. Patrick. See PATRICK, ST., ORDER OF.

Order of Teutonic Knights. Established towards the close of the 12th century, and thus called, as chiefly consisting of Germans, anciently called Teutons.

Order of the Annunciation. See ANNUNCIADA.

Order of the Bear. See BEAR, ORDER OF.

Order of the Black Eagle. See EAGLE, BLACK.

Order of the Crescent. See CRESCENT.

Order of the Golden Fleece. See GOLDEN FLEECE, ORDER OF THE.

Order of the Golden Stole. A Venetian military order, so called from a golden stole, which those knights wore over their shoulder, reaching to the knee both before and behind, a palm and a half broad. None are raised to this order but patricians, or noble Venetians. It is uncertain when this order was instituted.

Order of the Holy Ghost. See HOLY GHOST, ORDER OF THE.

Order of the Knights of the Garter. See GARTER, ORDER OF THE.

Order of the Knights of Malta. See ST. JOHN OF JERUSALEM.

Order of the Knights of St. Jago. Instituted by the king Ramiro of Spain, in commemoration of a victory obtained against the Moors, 1080. Their ensign is a red cross in the form of a sword.

Order of the Seraphim. See SERAPHIM, ORDER OF THE.

Order of the Sword. See SWORD, ORDER OF THE.

Order of the White Eagle. See WHITE EAGLE, ORDER OF THE.

Order, Open. In tactics, comprehends an interval of about 8 yards between each rank.

Order, Parade. When a regiment of horse or foot, a troop, or company, is drawn up with the ranks open and the officers in front, it is said to be in *parade order*.

Orderlies. Non-commissioned officers and soldiers appointed to wait upon generals and other officers, to communicate orders and carry messages.

Orderlies, Standing. Are soldiers who permanently perform orderly duty.

Orderly Book. A book for the sergeants to insert the orders which are issued from time to time.

Orderly Drum. The drummer that beats the orders, and gives notice of the hour for messing, etc., is so called.

Orderly Officer. The officer of the day; especially the officer of the day about an army headquarters in the field.

Orderly Room. A room in the barracks, used as the office of a company.

Orderly Sergeant. The first sergeant of a company is so called in the U. S. army.

Orders. Are the instructions, injunctions, or commands issued by superior officers. The orders of commanders of armies, divisions, brigades, regiments, are denominated orders of such army, division, etc., and are either general or special. They are numbered, general and special in separate series, each beginning with the year. In Great Britain and other European countries, and in the United States, orders generally take the designation of the headquarters from which they are issued.

Orders, General. Are orders that are issued to announce the hours for roll-calls and duties; the number and kind of orderlies, and the time when they shall be relieved; police regulations, and the prohibitions required by circumstances and localities; returns to be made and their forms; laws and regulations for the army; promotions and appointments; eulogies or censures to corps or individuals, and generally, whatever may be important to make known to the whole command.

Orders, Military. Companies of knights, instituted by kings and princes either for defense of the faith, or to confer marks of honor on their military subjects. See KNIGHTS, and names of orders under appropriate headings.

Orders, Regimental. Are such orders and instructions as grow out of general or special orders from superior authority, or proceed immediately from the commanding officer of a regiment.

Orders, Special. Are such as do not concern the troops generally, and need not be published to the whole command; such as those that relate to the march of some particular corps, the detaching of individuals, the granting requests, etc.

Orders, Standing. Are certain general rules and instructions, which are to be invariably followed, and are not subject to the temporary intervention of rank. Of this description are those orders which the permanent commander may judge fit to have inserted in the order books, and which are not to be altered by the temporary commander.

Ordinaire (Fr.). The soldiers' mess is so called among the French.

Ordinary of Arms. In heraldry, an index or dictionary of armorial coats, arranged, not according to names, like an armory, but according to the leading charges in the respective shields, so as to enable any one conversant with heraldic language, on seeing a shield of arms, to tell to whom it belonged.

Ordinary Time. In the U. S. army is quick time, which is 110 steps, or 86 yards in one minute, or 2 miles 1618 yards in an hour.

Ordnance. A general name for all kinds of weapons employed in war, and the appliances necessary for their use. Under the general term ordnance and ordnance stores are included all guns, howitzers, mortars, rockets, and projectiles of every description, the explosives used in warfare, all gun-carriages, limbers, caissons, mortar-beds, battery-wagons, and traveling-forges with their equipments, and all other apparatus and machines required for the service and manoeuvres of artillery at sieges or in the field; together with the materials for their construction, preservation, and repair. Also all small-arms, side-arms, and accoutrements for artillery, cavalry, and infantry, all ammunition for cannon and small-arms; and all stores of expenditures for the service of the various arms, materials for the construction and repair of ordnance buildings, utensils and stores for laboratories, including standing weights, gauges, and measures, and all other tools and utensils required for the performance of ordnance duty. Harness and horse equipments are also furnished by the ordnance department. This general application of the word is not the purport of the present article; it is its special signification as used by the artillery with which we have to do. Technically speaking, ordnance is a term applied to all heavy fire-arms which are discharged from carriages.

History.—Although the battering-rams and the engines for projecting missiles employed by the ancients and during the Middle Ages are regarded as artillery, yet the military weapons in use before the invention of fire-arms cannot fairly come under this designation. At what exact date cannon were first used is not known, but guns called "Crakys of War" were employed by Edward III. against the Scots in 1327, by the French at the siege of Puy Guillaume in 1388, and by Edward III. at Crécy, and at Calais in 1346. The first cannon, or *bombards*, were clumsy, wider at the mouth than at the chamber, and made of iron bars hooped together with iron rings. Ancient cannon were also made of wood wound with rope or wire, and in some instances were even occasionally constructed of leather. The balls fired from these bombards were first made of stone, which was afterwards superseded by iron. In the 15th century various kinds were known by the names of cannon, bombards, culverins, serpentines, etc. Bombards of great length and power were employed by Louis XI. during his Flemish campaign in 1477, some with stone balls and some with iron. About this time cannon began to be made of cast iron instead of hooped bars; and bronze or brass as material began to be used as well as iron, and projectiles were also made of cast iron instead of stone. The introduction of cast-iron projectiles led to the invention of *culverins*, which corresponded very nearly in construction and appearance to the guns of the present day; these were in some instances made of enormous lengths

from the erroneous idea that the range increased with the length of the piece. A remarkable gun of this description still exists at Dover, England, familiarly known as "Queen Anne's pocket-piece;" while it carries a ball weighing only 18 pounds, it is more than 28 feet in length. From the earliest days of artillery there existed short-chambered pieces, which projected stone balls under great angles of elevation; and in 1478 hollow projectiles filled with powder began to be employed; but it is probable that the accidents which accompanied their use caused them to be abandoned for the time. In 1684, however, this difficulty was overcome, and these pieces were introduced into the French service, forming the class of cannon now known as mortars. Early attempts were also made to throw hollow projectiles from culverins and other long guns, but great difficulties were experienced in loading them, and the accidents to which they were liable caused them to be abandoned. Subsequently, however, the Dutch artillerymen reduced their length so that the projectile could be inserted in its place by hand, and thus improved these cannon rapidly came into use under the name of howitzers, from the German *Haubitze*. A short cannon of large caliber for naval service was invented by Mr. Gascoigne in 1799, and called a *carromade*, after the Carron Iron-Works, Scotland, where it was first made. It was not for many years after hollow projectiles had been used that it was accidentally discovered that the firing of the gun-charge could be relied upon to light the fuze. Prior to this a long fuze lighted from the outside had been used. The difficulties and danger incurred in loading long guns with hollow projectiles delayed their application to shell-firing, and it was not until 1812 that they were used for firing both solid shot and shell at low angles. In this year a gun of this class, which was invented by Col. Bomford, Chief of Ordnance, U.S.A., was adopted by the United States, and a number of these guns were used in the war with England, 1812-16. About 1814 this invention of Col. Bomford's was improved upon by himself, and the gun thus improved was called a *columbiad*. The columbiad gave way about 1859 to the gun invented by Gen. Rodman. (See *RODMAN GUN*.) The dimensions of the columbiads were first taken to Europe by a young French officer, and thus fell into the hands of Gen. Paixhans, who introduced them, with certain modifications, into the French service about 1822. They were by this means first made known to the rest of Europe by the name of *Paixhan gun*, and small calibers were afterwards used in the U. S. service under that name. Cannon up to this time were constructed on the smooth-bore principle; the rifle principle, although employed by the Russians in 1615, by the Prussians in 1661, and by the Germans in 1690, had not been brought into general use on account of its imperfectness. From 1696

to 1888 many attempts were made to rifle cannon with more or less success; but although the firing of smooth-bore guns was as aberrant as that of smooth-bore muskets, and from greater range even more so, yet, since the gunners were safe from musketry fire at 200 yards, and the cannon could be directed against masses of men with tolerable certainty up to three times that distance, there was no special inducement to improve their powers. But the introduction of rifled small-arms changed the relative advantages; for a rifled small-arm might pick off the gunners of a smooth-bore cannon before their weapon could come into effective play. The Crimean war set inventors vigorously to work, and many admirable guns have resulted from their attempts, the great difficulty of the day being to decide which is most effective. Rifled guns have nearly superseded smooth-bored cannon, except in the United States, which still gives the preference to the latter.

Ordnance, Modern, History of. Heavy modern ordnance dates properly from the casting of the great Rodman smooth-bores in the United States. To the impetus thus given may be ascribed the origin of the powerful guns of the present day. In Rodman's study of gunpowder and the improvements introduced by him lay the germ of all subsequent progress in ordnance. His most important invention, *perforated cake powder*, was transplanted bodily to the continent of Europe, where, under the name of *prismatic powder*, it has been used ever since. So perfect is the theory of this powder that invention and science toiling over the subject for twenty years has produced nothing better. Since the first half of the decade—1860-70—the United States has fallen behind the nations of Europe in the power of her armament. Having been committed by her two great inventors, Rodman and Dahlgren, to cast-iron smooth-bores, which were fabricated in great numbers, her attitude has been that of Micawber,—waiting for something to turn up. England occupies the other extreme,—of all the powers she has ventured the greatest sums upon the theories of her gun-makers. Her private manufacturers have received such encouragement at home or abroad that they are now able to supply the whole world. Their only great rival on the continent is Krupp, who finds his market principally in Germany, Russia, and Turkey.

The early adoption of the rifle principle by all European powers placed them at once on a plane of advancement. The vexed questions of breech- and muzzle-loading and of gun construction have been decided by each nation in the manner most satisfactory to itself. Opinions differ widely, and it is probable that many changes may be made in these matters. Still, they all possess powerful guns which have certain features in common, essential to heavy ordnance in the present stage of its development. Large-grained powder, the first of these requisites,

is universally used (for varieties, see GUN-POWDER). Great length of bore, to utilize the whole force of the powder, is another characteristic. Great power is secured by immense charges of powder and weight of shot. A caliber of at least 12 inches, giving an oblong shot of about 700 pounds, seems to be regarded as a *sine qua non* for all armaments. (See CANNON, ORDNANCE, GREAT BRITAIN, RUSSIA, FRANCE, etc.) England has taken the lead in all these improvements, and though it would appear from recent events that her choice of gun systems is unfortunate, there is no question that all great advances since Rodman's day have been based upon her expensive experiments. The work of the celebrated "Committee on Explosives," 1875, of which Col. Younghusband and Capt. Noble (now a member of Sir Wm. Armstrong's firm) were members, did more to this end than any other investigation since Rodman's experiments in gunpowder. Acting upon the obvious idea that the peril to the life of the gun is relieved by air-space, the committee recommended the enlargement of the bore at the seat of the charge, or the use of a chamber larger than the bore. This simple expedient led at once to an immense increase in the power of guns while the pressure endangering them was kept at a point lower than before. Every good thing can be pushed too far. The immense charges made possible by the English chamber have been continually added to by the Italians in their 100-ton Armstrong monsters and the vital air-space reduced till a charge of 552 pounds of powder has recently (1880) burst one of these magnificent guns.

Nomenclature of Ordnance.—For component parts of cannon and their description, see CASCABEL, BASE OF THE BREECH, BASE-LINE, BASE-RING, BREECH, CHASE, ASTRAGAL AND FILLETS, NECK, SWELL OF THE MUZZLE, FACE, TRUNNIONS, RIMBASES, BORE, and REINFORCE. For recent modifications in the external form of cannon, see ORDNANCE, STRAINS UPON.

UNITED STATES.—*Smooth-bored.*—The official system for the land service comprises the following smooth-bored cannon: The Napoleon gun for field service (see NAPOLEON GUN) and the mountain howitzer for mountain and prairie service. (See HOWITZER.) For siege purposes, the 8-inch howitzer, 8- and 10-inch and 24-pounder Coehorn mortars,—and for sea-coast defense, 18-, 15-, and 20-inch (Rodman) and 10-, 18- and 15-inch mortars. No 15-inch mortars have been yet cast. The 24-pounder flank defense howitzer, as well as the 8- and 10-inch smooth-bored Rodman and the 10-inch sea-coast mortar, no longer belong to the system, and are no more to be cast. The 13-inch smooth-bore is an experimental gun, not more than two or three of which have been cast. The smooth-bored gun principally used in the naval service is the Dahlgren. (See ORDNANCE, CONSTRU-

TION OF.) The carronade is now little employed.

Rifled Cannon.—The rifled cannon adopted for the land service of the United States at the present time (1880) are, for the field service a 3- and 3½-inch rifle, having the exterior shape of Rodman guns, but made of wrought iron,—the former adopted in 1861; the 3½-inch gun has never been made—the model was adopted in 1870,—and three mitrailleurs, viz., 1-inch and ½-inch (Gatling), adopted in 1868, and a .45-inch Gatling, adopted in 1874, intended to replace the ½-inch, and to use the service cartridge of the rifle musket. In the siege service there is but one rifle gun properly belonging to the system of the United States, viz., 4½-inch, of casting, having the Rodman shape, but cast solid. The 80-pounder (4.2-inch) Parrott so extensively used is not a regulation gun. (See **ORDNANCE, CONSTRUCTION OF.**) The weight of the 4½-inch is 8570 pounds. It has an extreme length of 188 inches. The twist is uniform, and the weight of the solid projectile 32½ pounds, and of the charge 3½ pounds. The piece is loaded at the muzzle. The rifled sea-coast guns belonging to the system are a 10- and 12-inch, made of cast iron, and weighing 40,681 and 52,000 pounds respectively. The extreme length of the 10-inch is 180, and of the 12-inch 192 inches; the weight of the solid shot, 292 and 620 pounds respectively; the twist in each is uniform, and both are muzzle-loaders. Such is the official system of the United States. All the large guns are cast iron and are now useless as an armament to cope with modern armed ironclads. We have, however, a number of experimental guns, the models of which must be our immediate reliance in case of foreign war. In making these experimental rifles it has been held in view to utilize as far as possible the cast-iron ordnance now on hand. They are all made of cast-iron cases fitted with internal tubes of wrought iron (steel has also been used) after the plans of Parsons and Palliser. (See **ORDNANCE, CONSTRUCTION OF.**) The 12½-inch rifle, muzzle-loader, is an original construction, the case required being larger than the 15-inch smooth-bored. The weight of gun is 40 tons; charge, 110 pounds *hexagonal powder*; shot, 700 pounds. The others are converted guns,—the 10-inch rifle, muzzle-loader, converted from 18-inch smooth-bore by inserting wrought-iron tube; two patterns of 8-inch rifle, breech- and muzzle-loaders, converted from 10-inch smooth-bores by muzzle and breech insertion of tubes. Quite a number of the muzzle-loaders have been made and mounted. A similar gun has been made for the naval service by converting the 11-inch Dahlgren. Parrott 100-pounders have also been converted into 6.4-inch breech-loaders for the navy.

Although the Parrott gun does not belong to the system adopted by the United States, it has been much employed for both siege and sea-coast purposes, almost to the ex-

clusion of other rifled cannon. They are also very generally used in the naval service. There are eight of these guns employed in the service of the United States, viz.: a 300-pounder (10-inch), 200-pounder (8-inch), and 100-pounder (6.4-inch), in use by both land and naval forces; a 60-pounder (5.8-inch) and 30-pounder (4.2-inch), used exclusively by the navy, and a 30-pounder (4.2-inch), 20-pounder (3.67-inch), and 10-pounder (3-inch), employed exclusively by the land forces. The Parrott cannon are all muzzle-loading and made of cast iron, reinforced with a wrought-iron jacket. See **ORDNANCE, CONSTRUCTION OF.**

GREAT BRITAIN.—The cannon employed in the British service are all rifled, and nearly all muzzle-loaders.

Royal Arsenal, Woolwich.—The guns belonging to the British system, and made at the Royal Arsenal, Woolwich, are: for land service, an 11-inch gun, wrought iron, muzzle-loading, weighing 25 tons; two 7-inch, weighing 7 tons, and differing slightly in length and details of construction; a 16-pounder (3.6-inch), weighing 12 cwt.; and a 9-pounder (3-inch), weighing 8 cwt. These guns are all made of wrought iron. There are also an 8-inch howitzer weighing 46 cwt., also of wrought iron, and two converted guns, viz., a 64-pounder (6.29-inch) converted from 82-pounder, and an 80-pounder converted from 68-pounder smooth-bore. Both of these guns are of cast iron, with wrought-iron tubes, and were converted according to the Palliser method. For the Woolwich 88-ton gun, see **ARMSTRONG CANNON.** For sea service exclusively, there are made at the Woolwich Arsenal a 12-inch, weighing 35 tons; two 8-inch, weighing 9 tons respectively, of the same length, one having no preponderance, and differing in other details of their construction; two 7-inch, weighing 6.5 tons respectively, differing slightly in length and details; a 7-inch, weighing 4.5 tons; and 9-pounder (3-inch), weighing 6 cwt. These guns are all made of wrought iron, and are muzzle-loading. For both land and sea service, there are made at the Royal Arsenal a 12-inch, weighing 25 tons; a 10-inch, weighing 18 tons; two 9-inch, one of which has no preponderance, the other a preponderance of 5 cwt.; three 64-pounders (6.8-inch), each weighing 64 cwt., but differing in length and construction. These guns are all made of wrought iron; for both services is used a 64-pounder (6.29 inch), converted from 8-inch smooth-bored according to the Palliser method. There are besides two bronze guns, one called the "boat gun," a 7-pounder (3-inch) weighing 200 pounds; the other a 9-pounder (3-inch), used in the Indian service, and weighing 8 cwt.; also a 7-pounder (3-inch mountain gun of steel, and weighing 150 pounds; these are all muzzle-loaders. The 9-, 10-, 11-, and 12-inch calibers have all steel tubes; one 7-ton and one 6.5-ton gun have tubes of wrought iron.

Armstrong Cannon.—The guns used in the British service made by Sir William Armstrong are—for the land service—a 12-inch weighing 38 tons (some of these guns are bored to 12½ inches), an 11-inch weighing 25 tons, a 7-inch weighing 7 tons, a 40-pounder (4.75-inch) weighing 85 cwt., a 25-pounder (4-inch), and a 16-pounder (3.6 inch) weighing 18 and 12 cwt. respectively, a 9-pounder (3-inch) weighing 6 cwt., a 10-inch weighing 6 tons, having no preponderance. These guns are all of wrought iron and muzzle-loading. There are also used in the land service, and of the same make, a 7-pounder (3-inch) muzzle-loading steel gun weighing 160 pounds, an 8-inch muzzle-loading howitzer made of wrought iron and weighing 46 cwt., a 64-pounder (6.29-inch) converted from 82-pounder, and an 80-pounder (6.29-inch) converted by Paliser method from 68-pounder muzzle-loading, made of cast iron with wrought-iron tubes. The other guns manufactured by Sir William Armstrong, and used in the land service, are all breech-loading, viz.: a 7-inch (screw) weighing 72 cwt., a 20-pounder (3.75-inch screw) weighing 16 cwt., a 64-pounder (6.4-inch wedge) weighing 64 cwt., and a Gatling gun (0.45) weighing 8 cwt. 84 pounds. The guns used in the sea service of this make are a 12-inch weighing 35 tons, an 8-inch weighing 9 tons, two 7-inch weighing 6 tons 10 cwt. and 90 cwt. respectively, and a 9-pounder (3-inch) weighing 6 cwt. These are all muzzle-loading, and made of wrought iron. There is another muzzle-loading gun used for sea service, viz., a 64-pounder (6.29-inch) converted from 8-inch, and weighing 71 cwt.; this gun is of cast iron with a wrought iron tube. The breech-loaders used for sea service are two 20-pounders (3.75-inch screw) weighing 15 and 13 cwt. respectively, 40-pounder (4.75-inch) wedge weighing 82 cwt., and a Gatling gun (0.65-inch) weighing 7 cwt. 85 pounds; these guns are all of wrought iron. For land and sea service are constructed a 12-inch weighing 25 tons, a 10- and 9-inch weighing 18 and 12 tons respectively, a 64-pounder (6.3-inch) weighing 64 cwt., a 9-pounder (3-inch) weighing 8 cwt., a 7-pounder (3-inch) weighing 200 pounds, and made of steel; the others are of wrought iron, and all are muzzle-loading. The breech-loading guns of this manufacture used in both land and sea service are a 7-inch (screw) weighing 82 cwt., two 40-pounders (4.75-inch) screw weighing 85 and 82 cwt. respectively, a 12-pounder (3-inch), 9-pounder (3-inch), and 6-pounder (2.5 inch) screw weighing 8, 6, and 8 cwt. respectively. They are all made of wrought iron. See **ARMSTRONG GUN.**

GERMANY.—In Germany the Krupp gun is almost entirely employed; they are all breech-loading and constructed of steel. (For particular construction, see **ORDNANCE, CONSTRUCTION OF.**) Those used in the German land service are a 28-centimetre how-

itzer weighing 9.82 tons, caliber in inches 11.023, a long 21-centimetre weighing 9.84 tons, caliber 8.241 inches, a short 21-centimetre weighing 8.84, caliber 8.241 inches, a short 15-centimetre weighing 2.9 tons, caliber 5.869 inches, a 12-, 9-, 8-, and 6-centimetre, whose calibers are 4.785, 3.602, 3.090, and 2.862 inches, and whose weights are 1.87 tons, and 985,649,285 pounds respectively. In the sea service are used a 304-centimetre weighing 35.8 tons, caliber 12.007 inches, a short 26-centimetre weighing 17.67 tons, caliber 10,236 inches, a long 24-centimetre weighing 14.88 tons, caliber 9.267 inches, and a short 24-centimetre. For both land and sea service are employed a long 17-centimetre weighing 5.5 tons, caliber 6.771 inches, a short 17-centimetre, a long 16-centimetre weighing 3.03 tons, caliber 5.869 inches, and a long 15-centimetre weighing 3.09 tons.

FRANCE.—The guns adopted in the French service are both breech- and muzzle-loading, and are, for the land service, a siege-gun, 24-pounder rifled breech-loading, weighing 40.65 tons, caliber 6.01 inches, for fortress guns a 24- and 12-pounder rifled muzzle-loading, weighing 5953 and 3307 pounds, and having calibers of 6.01 and 4.77 inches respectively. For siege-guns a 24- and 12-pounder rifled weighing 4409 and 1940 pounds, whose respective calibers are 6.01 and 4.77 inches and muzzle-loading. For field artillery a 12-, 8-, and 4-pounder rifled, weighing respectively 1867, 1234.6, and 727.55 pounds, and whose calibers are 4.77, 4.17, and 3.40 inches respectively, all muzzle-loading. There is also a 4-pounder rifled muzzle-loading mountain piece weighing 220.5 pounds, whose caliber is 3.40 inches. In the sea-coast service there are a 80-pounder (muzzle-loader) not hooped, weighing 61 cwt., caliber 6.48 inches, a 30-pounder (muzzle-loader or breech-loader) hooped, weighing 70.86 cwt., caliber 5.46 inches, a howitzer 22-centimetre rifled and hooped, caliber 8.66 inches. In the French sea-service are a 32-centimetre weighing 84.5 tons, caliber 12.599 inches, and a 27-centimetre weighing 21.7 tons, caliber 10.808 inches. Both of these guns are breech-loading. For both land and sea service are used a 24-centimetre weighing 18.8 tons, caliber 9.499 inches, a 19-centimetre weighing 7.9 tons, caliber 7.638 inches, a 16-centimetre weighing 98.42 cwt., caliber 6.484 inches, a 14-centimetre weighing 52.26 cwt., caliber 5.456 inches. The guns used for sea service only, or for both land and sea service, are all made of cast iron, tubed with steel nearly to the trunnions, and strengthened near the breech by steel rings heated and shrunk on. The fortress guns, most of the siege, and all the field-guns are made of bronze. The large breech-loaders use the solid breech-screw *fermeture*. The term "pounder" as applied to certain guns has no reference to the weight of the oblong projectile used, but to the weight of the corresponding spherical solid shot.

RUSSIA.—In the Russian service the Krupp gun is rapidly taking the place of all others; there are, however, still used for sea service, a 12-inch and 6-inch breech-loader weighing 40 tons and 8.92 tons respectively; also a 12.2-pounder boat-gun weighing 792 pounds, and for both land and sea service an 8-inch breech-loader weighing 8.764 tons, and an 8-inch breech-loading mortar, weighing 8.21 tons. These guns are all made of steel.

Ordnance, Ammunition for. For convenience in loading and safety in transportation, cannon ammunition is prepared in a peculiar manner and with great care. The ammunition so prepared is classified into field and mountain, siege and sea-coast ammunition.

Ammunition for Field Service is composed of solid shot, shells, spherical case-shot, and canister-shot (see headings). In mountain service solid shot are omitted. A stand of ammunition is composed of the projectile, sabot, straps, cartridge-bag, cylinder, and cap. The projectile is secured by two tin straps, fastened at the ends with tacks driven into the sabot. The straps cross each other at right angles; for solid shot, one strap passing through a slit in the other; for hollow projectiles, both straps are fastened to a tin ring which surrounds the fuze-hole. A round of canister for the field service consists of a tin cylinder filled with cast-iron shot, which slips over the end of the sabot, to which it is secured with small nails. The materials of which cartridge-bags are made are flannel, wildbore, or serge; the fabric should be soft and closely woven, to prevent the powder sifting out. Fabrics of cotton and flax are not used, because the powder sifts through them, and they are more apt to leave fire in the gun than woolen stuffs. A cartridge-bag for the field service is made of two pieces,—a rectangular piece for the sides, and a circular piece for the bottom. The charge is determined by measurement. The cylinder and cap are made of stout paper. The cylinder is used to give stiffness to the cartridge at the junction of the sabot and bag; the cap covers the exposed portion of the bag, is drawn off before loading, and placed over the projectile, or thrown away. The cartridge-bag is attached to the projectile by tying it around the grooves of the sabot with twine.

Fixed Ammunition.—Ammunition thus prepared is called fixed ammunition. It is used in the field and mountain service for smooth-bore guns and howitzers. For rifled guns the bag and projectile are carried separately. The term *strapped ammunition* is applied when the projectile is attached to a sabot without grooves; and to give a proper form to the cartridge-bag, the mouth is closed with a cartridge-block, which resembles a sabot; hence the name *strapped ammunition*. This kind of cartridge is nearly obsolete.

Packing, etc.—As soon as ammunition is

finished it should be gauged, to see that it is of the proper caliber; it is afterwards packed in boxes containing 10 rounds each.

Siege and Sea-coast Ammunition.—On account of the great weight of siege and sea-coast ammunition, the cartridge-bag and projectile are carried separately. The cartridge-bags for large charges of powder are made of two pieces of woolen stuff, or of a paper tube with a woolen cloth bottom. The former are preferred for rapid firing. For sea-coast howitzers the bag should fill the chamber; if the piece be fired with a reduced charge, a cartridge-block should be inserted into the bag to give it proper size. For mortars the bag is only used to carry the powder, and when the piece is loaded, the powder is poured into the chamber; bags of any suitable size will answer for this service. For hot-shot cartridges bags are made double, by putting one bag within another. Care should be taken to see that the bags are free from holes. For ricochet firing, or other occasions when very small charges are required, a cartridge-bag of inferior caliber may be used. In the siege and sea-coast services, solid shot are transported and loaded loosely, but hollow projectiles are strapped to sabots, to prevent the fuze from coming in contact with the powder of the charge. The sabots are made from thick plank, and the straps are fastened as in the field service.

Ordnance, Carriages for. The carriages for cannon may be classified from their use into field, mountain, prairie, and sea-coast carriages, and mortar-beds. (See particular headings.) They may be further divided into those required for the immediate service and transportation of cannon, as gun-carriages and mortar-beds, and those employed for the transportation of ammunition, implements and materials for repairs, as caissons, mortar-wagons, forges, and battery-wagons. The field-, mountain-, prairie-, and siege-carriages being required for the transportation of their pieces are similar in their construction; those for sea-coast purposes differ materially from the others.

Nomenclature of Artillery Carriage.—The principal parts of the field-carriage, and of all artillery carriages, other than the sea-coast, are: stock, of squared wood in two pieces, which serves to connect the gun-carriage with the limber, and to direct the piece; it includes the head, to which the sponge-bucket ring is attached; groove, trail, or curved part of the stock, which rest on the ground when the piece is unlimbered; rounding of the trail, trail-plate, a piece of iron fastened to the end of the trail and terminated by a very strong ring, called the lunette, which receives the pintle-hook by which the limber is attached; pointing-rings, large and small, which receive the hand-spike; trail-handles, on each side of the stock for the purpose of raising it; prolonge-hooks, on which the prolonge is coiled; wheel-guard plates, lock-chain, used to keep

the wheel from turning; it is on the side of the carriage, and has an eye-plate and bolt; sponge and rammer stop, sponge-chain and hasp, ear-plate for sponge-chain and hasp; ear-plate to support worm; key-chain and key; elevating-screw; the latter has a handle with four prongs; elevating-screw box, elevating-screw bed, rondelles, which connect cheeks and stock; cheeks, two pieces of wood between which the gun rests; washer-hooks for handspike, washer-hook for lock-chain, under-strap, right sponge-hook, sponge and worm-hook, handspike-rings, trunnion-plates, into the beds or depressions of which the trunnions fit; cap-squares, cap-square chain, key-chain and key. Axle, including axle-body, of wood; axle-tree, of iron, axle-arm, the rounded extremities of the axle-tree on which the wheels revolve; lynch-pin, lynch-pin washer and hook. Wheels; each includes nave, nave-bands, nave-box, spokes, felloes, tire. In the new model for field service, cannoneers' seats are on the axle between the cheeks and wheels; each consists of an iron chair supported on a rectangular bar inserted in a vertical iron socket, and resting on a strong steel spring; the socket is supported by two brass braces fastened to the axle by axle-straps; to an iron cross-piece at the top of the socket are attached two iron braces, which help to support the iron foot-rest attached to the brass braces. The chair has arms and faces to the trail. This refers to the carriage proper, considered only in relation to the fire of the piece, or as a two-wheeled carriage. To suit it to the easy and rapid transportation of its load it must be converted into a four-wheeled carriage, which is done by attaching it to another two-wheeled carriage called a limber.

The *limber* consists of a similar axle-body, axle, and two wheels, and on these rests a frame-work, to receive the tongue. On top of the whole is an ammunition-box, the top of which forms a seat for three cannoneers. In rear of the axle-tree is a pintle-hook to receive the lunette of the trail. Connected with the frame-work in front is a fixed splinter-bar with four hooks, to which are attached the traces of the wheel horses. At the extremity of the tongue are placed two pole-chains, by which the tongue or pole is held up, and a pole-yoke with two movable branches, to prevent, as much as possible, the pole from oscillating and striking the horses. The principal parts of a field-limber are: pole, including pole-pad; pole-straps, by which the pole is guided when the team is hitched; pole-strap iron, pole-yoke, muff and collar, pole-yoke branches, to which are attached sliding-rings; splinter-bar, to which the horses are hitched by four trace-hooks; end-bands, middle-bands, pole-prop, including socket, ferrule, and chain; hounds, pieces of wood upon which the chests rest, connecting the axle-body with the splinter-bar; forks, pieces of wood between the hounds, forming an opening in which the pole is placed; fork-stamp, foot-boards, foot-board

brackets, chest, chest-handles, cover, of wood; cover-plate, of copper; turnbuckle, hasp, back-stay, front-stay, stay-pins, stay-pin keys, under strap, pintle-hook, on rear part of axle-tree, which attaches the limber to the carriage; pintle-hook key, axle, wheels. The field-carriages employed in the U. S. service are three, one for the 8-inch rifle carriage (which, with slight modifications, is adapted to the 1-inch mitrailleuse), one for the 12-pounder, and one for the $\frac{1}{2}$ -inch and .45-inch mitrailleuse. The corresponding parts of these carriages differ only in their dimensions. All limbers are similar.

Mountain-Carriage.—The mountain-carriage differs in construction from the field-carriage inasmuch as the stocks and cheeks are formed of the same piece by hollowing out the head of the stock, the wheels are smaller and the axle-tree is made of wood, the arms being protected from wear by skeans. It is arranged for draught by attaching a pair of shafts to the trail. The pack-saddle and its harness are constructed to carry severally the howitzer and shafts, the carriage, or two ammunition-chests; or it enables an animal to draw the carriage with the howitzer mounted upon it.

Prairie-Carriage.—The prairie-carriage is designed to carry the mountain howitzer, and is similar to the mountain-carriage in form; but being exclusively for draught, the axle-tree is of iron, and the wheels are made higher and the distance between them greater than in the mountain-carriage. It has a limber and is drawn by two horses abreast, as in field-carriages. The ammunition is packed in mountain ammunition-chests, two of which are carried on the limber.

Siege-Carriages.—There are three different kinds of siege-carriages used in the U. S. service, one for the $\frac{1}{2}$ -inch rifle, another on which the 80-pounder Parrott is mounted, and a third for the 8-inch howitzer, being the old 12-pounder, 18-pounder, and 24-pounder siege-carriages modified; these are all constructed in the same manner, and differ only in their dimensions. Siege-carriages are similar to the field-carriage in construction (see FIELD-CARRIAGE), the principal difference being in the manner in which they are joined to the limbers. Projecting upwards from the limber and in rear of the axle-tree is placed a pintle, which enters a hole made in the trail from the under side, and a lashing chain and hook keep the two parts together when once in position; the weight of the stock bearing on the rear of the limber relieves the horses of the weight of the pole, which is long and heavy. On the upper surface of the cheeks near the rear ends are placed two projecting bolts, which with the curve of the cheeks form resting-places for the trunnions, when the piece is in position for transportation. They are called traveling trunnion-beds. When the piece is in this position the breech rests upon the bolster, which is a curved block of wood bolted to the upper side of the stock.

Sea-Coast Carriages are divided into barbette front-pintle and barbette centre-pintle carriages, casemate, and flank-defense carriages; depending upon the part of the work in which they are mounted. The casemate-carriage differs from the barbette in being much lower. Sea-coast carriages are now chiefly made of wrought iron. All are composed of two principal parts, viz.: the gun-carriage and chassis. The gun-carriage is composed of two cheeks, held together by two plates of boiler-iron, called the front and rear transoms respectively. Each cheek is formed of two pieces of boiler-iron cut to a triangular shape, separated at the edges by interposing the vertical portion or web of a T-shaped bar. The horizontal branches project over each side to form a double rim, which gives stiffness to the cheeks. Flat bars of iron are also placed between the plates at suitable intervals to stiffen the cheeks in the direction in which the weight and recoil of the piece bear upon them. All these parts are held together by screw-bolts. The motion to and from battery is regulated in the 8- and 10-inch carriages by a pair of eccentric truck-wheels, called manoeuvring-wheels, which work on an axle-tree placed underneath and a little in front of the centre of the trunnions. When it becomes necessary to check the recoil of the gun-carriage, the wheels are thrown out of gear by means of a handspike inserted in the socket attached to the end of the axle-tree, and the carriage moved on sliding friction. When the gun is to be moved into battery, the wheels are thrown into gear in a similar manner, and the front of the carriage moves on rolling friction. The manoeuvring-wheels mentioned above are fixed on the projecting ends of the axle-tree, the axis of the wheel being eccentric with the axis of the axle-tree. These eccentrics are so arranged that when the centres of the wheels are at their lowest points, the surface of the wheels bear on the rails of the chassis, and raise the gun-carriage from it; and when the centres are at their highest points, the surfaces of the wheels do not touch the rails, and the gun-carriage is in contact with them. In case there is no socket connected with the end of the axle-tree, the wheel is thrown into or out of gear, that is, made to bear on the rail of the chassis, or relieved from it, by turning the axle-tree with a wrench placed on the hexagonal end. In the 15-inch carriage there are two pairs of manoeuvring-wheels, one pair being placed in front as above described, and the other pair near the rear end of the carriage. In all sea-coast carriages except the flank casemate the elevation and depression are given by a lever, the point of which works in a ratchet cut in the breech of the piece. The fulcrum (ratchet-post) is made of cast iron and rests on the rear transom of the gun-carriage. It has several notches for adjusting the position of the elevating bar. The chassis is a movable railway on which the gun-carriage moves to

and from battery. It is composed of two wrought-iron rails inclined 8° to the horizon, and united by transoms as in the gun-carriage. In addition to the transoms, there are several diagonal braces to give stiffness to the chassis. For the 10-inch and smaller carriages, the chassis-rails are single beams of rolled iron, 15 inches deep; for all calibers above, the rails are made of long rectangular pieces of boiler-plate and T-iron, in a manner similar to that of the cheeks of the gun-carriage. In order to move the carriage horizontally in the operation of aiming the piece, the chassis is supported on traverse wheels, which roll on circular plates of iron, fastened to a bed of solid masonry, called the traverse circles. The motion of the gun-carriage is checked front and rear, by pieces of iron bolted to the top of the rails, called hurters and counter-hurters; and it is prevented from slipping off sideways by friction rollers and guides, which are bolted to the cheeks and transoms. In a late modification of the 15-inch carriage, the front eccentric axle is replaced by an ordinary one, dispensing with axle-pawls and friction-bands, the handspike pawls are made double instead of single, with a spring to keep them out of the ratchets, the front set of transoms and diagonal braces are removed from the chassis, and pneumatic or hydraulic buffers to check the recoil are put in with thick braces. When the rear manoeuvring-wheels are out of gear, the top carriage touches the rails of the chassis and moves on sliding friction, and when they are in gear the front wheels are also made to touch the rails and the top carriage moves on rolling friction. To prevent the rear manoeuvring-wheels from working out of gear while the gun is being run from battery, or jumping in gear when the gun is fired, pawls are provided for locking the rear axle. When no pawls are provided for locking the eccentric axle, it is often necessary for one cannoneer to remain embarked in the axle-socket to prevent the axle from flying out of gear. The 15-inch carriage allows an elevation of about 32° and a depression of about 6° , unless when fitted with pneumatic buffers, when no more than 25° elevation can be given. With the hydraulic buffer which passes along the centre of the chassis and is little used in the U. S. service the elevation is still further diminished. The 10-inch rifle and 18-inch smooth-bore are used with the 13-inch carriage, and the 12-inch rifle and 15-inch smooth-bore on the 15-inch carriage; the 20-inch gun has a separate carriage. The flank-casemate carriage is adapted to the mounting of the 24-pounder iron howitzer in the flanks of casemate batteries. Several modifications have been introduced into the carriages for the experimental rifled guns. For the largest calibers the chassis-rails are deeper in rear than in front. The pintle, set in a heavy flanged block of cast iron, is in front of the chassis, to which it is attached by a strap or heavy

plate of iron. The top carriage is manoeuvred by chain-gearing worked by a capstan near the rear of the chassis. The elevation is given by a wheel with projecting spokes on the side of the top carriage, which is geared to work a toothed arc attached to the breech of the gun, the reading being given by a pointer on a dial-plate above the wheel. Rubber buffers are placed at the rear transom of the chassis to assist the cylinders to take up the recoil. Friction-plates attached by india-rubber ends to the rear transom take the place of cylinders in certain smaller carriages. In some cases the traverse-wheels are made to relieve the pintle of part of the strain by grooving them to run on heavy traverse-rails and inclining them towards the pintle.

Mortar-Beds.—Mortars are fired from a bed; in the U. S. service there are three kinds of mortar-beds in use in the siege service; the 8-inch, 10-inch, and the Coehorn; the first two differ only in dimensions. They are made of wrought iron and put together after the manner of the sea-coast gun-carriage. The different parts are the cheeks, which, like those of the gun-carriage, are triangular in shape, and two transoms connecting the cheeks together. At the end of each cheek are projections, called front and rear notches, underneath which the cannoners embark with their handspikes to move the bed on the platform; there are also two front and two rear manoeuvring-bolts for the same purpose. The elevation and depression are given as in the gun-carriage by embarring with the iron elevating bar through the fulcrum into the ratchets on the breech of the mortar. The Coehorn-bed is made of a block of oak wood, in one piece, or two pieces joined together with bolts. A recess for the trunnions and part of the breech is made in the top of the bed, and the trunnions are kept in their places by plates of iron bolted down over them. Two iron handles are bolted to the bed on each side, by which four men can carry the bed with the mortar in its place, the entire weight being only 296 pounds. Sea-coast mortar-beds are similar to those for siege purposes, but they have eccentric truck-wheels for manoeuvring the mortar-bed on the platform and the manoeuvring-bolts are omitted. The 18-inch sea-coast mortar is now mounted upon a centre pintle-carriage. The usual bed now become the top carriage, is placed upon a chassis resting on a platform. The top carriage has a crane attached to the left cheek, and to the inside of the right cheek is attached a pawl worked from the front, for locking the eccentric axle in and out of gear, and the carriage is strengthened by an additional rear transom about 5 inches wide, the pipe being omitted. The chassis has the usual appliance for throwing this class of carriages into gear, and in addition an eccentric axle placed at right angles to and supported by a double front transom, and carrying a traverse wheel, by means of which

motion is communicated to the chassis. The chassis is otherwise transomed and braced in accordance with the system. Heretofore nearly all sea-coast carriages were made of wood, but in consequence of the great difficulty of preserving this material from decay, especially when exposed to the dampness of casemates, they have nearly all been replaced by wrought iron. The carriages principally employed for the transportation of ammunition, implements, and materials for repairs, are caissons, mortar-wagons, forges, and battery-wagons.

The Caisson.—Caissons are used for conveying ammunition for a field-battery; all are similar in form. It is a four-wheeled carriage, consisting of two parts, one of which is a limber similar to that of the gun-carriage, and connected in a similar way by a wooden stock and lunette. On the axle-body of the rear part and parallel to the stock are placed three rails, upon which are fastened two ammunition-chests, one behind the other, and similar to the one on the limber; so that the caisson has three ammunition-chests, which will seat 9 cannoners. The interior compartments of the ammunition-chests vary according to the nature of the ammunition with which they are loaded. In rear of the last chest is placed a spare-wheel axle of iron, with a chain and toggle at the end of it. On the rear end of the middle rail is placed a carriage hook similar to a pintle-hook, to which the lunette of a gun-carriage whose limber has become disabled may be attached, and the gun carried off the field. The caisson has the same turning capacity and mobility as the gun-carriage, so that it can follow the piece in all its manoeuvres, if necessary. It also carries a spare-wheel, spare-pole, etc. The principal parts of the caisson are: stock, or middle-rail; it has an iron lunette on its front end; side-rails, front foot-board, rear foot-board, middle-chest, rear-chest, spare-wheel axle; it has a body, two ribs, and a chain and toggle to secure the wheel; there are also two stays for the axle; lock-chains, fastened to lock-chain bridges under the front ends of the side-rails, and held up by lock-chain hooks fastened to the outside of the side-rails; spare-pole, spare-pole key, key-plate, chain, and pin; the key-plate is fastened to the under side of the lunette; the key is attached to the left side of the stock by a chain and eye-pin; carriage-hook, for attaching a carriage that has lost its limber; wheel-guard plates, spare-pole ring, held by the axle-strap; ring-bolt for spare handspike, key-plate and key, on the right side of the middle-rail; key-plate, chain, and key for the shovel-handle, on the inside of the right side-rail; middle assembling-bar, of iron; it has two ears in the middle to serve as stay-plates for the middle-chests, and a slot for the axle on the right of the middle-rail; rear assembling-bar; it supports the spare-wheel axle, and has a slot for the pickaxe on the left of the middle-rail.

Axle, the axle-body, being notched to receive the middle-rail and tenoned to fit into the notches in the side-rails; staples for tool-handles; they are driven into the top of the axle-body in front of the iron axle-tree, one for the shovel-handle near the right side-rail, the other for the handle of the pickaxe on the left of the middle-rail. Wheels of all artillery carriages are similarly constructed; they differ, however, in the size and strength of certain parts, depending on the size of the carriage to which they are attached. The principal parts are: the nave, the nave-bands, the nave-box, the spokes, the felloes, and the tire. The nave constitutes the central portion of the wheel, and distributes the pressure of the axle-arm to the spokes. It is generally made of a single piece of wood, and strengthened by four iron bands called the nave-bands. It is also pierced with a conical hole for the axle-arm; and to diminish wear and friction, it is lined with a box of brass or cast iron, called the nave-box. The spokes serve to transmit the pressure of the load to the rim of the wheel. In all artillery carriages there are seven felloes and fourteen spokes. The felloes are the wooden segments which form the rim, and are joined together at their ends by wooden pins, or dowels. The tire is a strong band of iron, shrunk tightly around the felloes, to hold them together, and protect the rim from wearing away by contact with the ground.

Mortar-wagons are designed for the transportation of siege-mortars and their beds, or of guns or large shot, and shells. A limber similar to the one for siege-gun carriages is used with it. The body consists of a platform of rails and transoms resting on an axle-tree. The stock is formed by prolonging the two middle-rails. The side-rails projecting to the rear form supports for the pivots of a windlass-roller. This roller is used to load guns and mortars on the wagon by drawing them up the stock. A muzzle-bolster on the stock near the limber, and a breech-hurter near the hind part of the wagon, are provided and used when long pieces are transported on it. Mortars are usually carried mounted on their beds.

The *traveling-forge* is a complete blacksmith's establishment, which accompanies a battery for the purpose of making repairs and shoeing horses. It consists of a body, upon which is constructed the bellows-house, etc., and the limber, which supports the stock in transportation. The body is composed of two rails, a stock, and an axle-tree. The bellows-house is divided into the bellows-room and iron-room. Attached to the back of the house is the coal-box, and in front of it is the fireplace. From the upper and front part of the bellows an air-pipe proceeds in a downward direction to the air-box, which is placed behind the fireplace. The vise is permanently attached to the stock, and the anvil, when in use, is supported on a stone or log of wood, and when

transported is carried on the hearth of the fireplace. The remaining tools are carried in the limber-chest. When in working order the point of the stock is supported by a prop. Nomenclature of the traveling-forge body: Lunette, prop, vise, stock, wheel-guard plates, stock-stirrup, fireplace, back of fireplace, air-back, wind-pipe, bellows, ribs, hinges, hook, fulcrum, hook and staple, roof of bellows-house, bows, studs, girders, end-boards, bottom-boards, side-rail, lock-chain hook, coal-box, lid or roof, handles, hinges, turnbuckle, and hasp. A new pattern of field-forge has been proposed by Col. Laidley, U. S. Ordnance Corps.

The *battery-wagon* is employed to transport the tools and materials for repairs. Among the tools are those for carriage-makers, saddlers, armorers, and laboratorians' use, scythes and sickles for cutting forage, and spare implements for the service of the piece. The body of the battery-wagon is a large, rectangular box, covered with a roof of painted canvas; and to the back part is attached a rack for carrying forage. The bottom of the body is formed of one middle- and two side-rails, resting on a stock and axle-tree, as in the traveling-forge. The tools and materials of the battery-wagon are carefully packed in the manner prescribed by the Ordnance Manual, in order that no difficulty may be experienced in finding a particular article when wanted. The smaller articles are carried in boxes properly lettered and numbered. The traveling-forge and battery-wagon are not confined to the service of field-batteries, but are used with siege and sea-coast carriages as occasion may require. Nomenclature of the battery-wagon body: Lunette, stock, wheel-guard plate, lock-chain, lock-chain bridle, lock-chain hook, studs, side-rails, upper rails, hinges, bows, cover-boards, cover-strap and turnbuckle, hasp, side-boards, stays, bottom-rails, bottom-boards, cross-bars, forage-rack, including chains, sides, and bars.

Ordnance, Construction of. The present condition of gun construction is mainly experimental. Iron in one form or another is the only material used for heavy artillery, but the particular form in which it is to be used, whether as cast, wrought, or steel, or whether in bars, coils, or ingots, or in combination,—as, for instance, steel or wrought iron interior and cast iron or wire-wrapped or hooped exterior,—is still undecided, and it is left for experiments which are still in progress, or to be made hereafter, to decide which is best. In the United States, cast iron is used for smooth-bore guns, and also for rifle guns, but as its use for the latter has not proved satisfactory, experiments are now being made with wrought iron lined and with wire-wrapped and other built-up guns, with fair prospect of success. In England, modern gun construction at one period inclined to the use of a steel or wrought iron interior tube, strengthened by an exte-

rior casting of iron, which is the system of Palliser and Parsons. But the preference for the inventions of Sir William Armstrong, improved by those of Fraser, have resulted in the exclusive use, in that country at present, of the system of these two inventors. This method of gun construction is, in brief, a steel core (or body of the gun) strengthened by three or more exterior tubes of coiled wrought iron. This system is at present popularly known as the "Woolwich," but sometimes called the "Elswick," from the place where Sir William Armstrong's works are now located. In Germany and Russia, and some other European nations, the Krupp system of heavy forgings of steel ingots is preferred. This last is by far the most expensive, and does not always produce the most durable guns. The question of breech- or muzzle-loading is still an undecided one. (See BREECH-LOADING and BREECH-MECHANISM.) The Germans prefer the first named, as do the French, Austrians, and Russians, for large calibers and for most small guns, while the English, after several years' trial of the first, have of late abandoned its use and returned to the muzzle-loader, though the question has again been recently agitated. In the United States, experiments still going on have not yet demonstrated which principle is the best suited to the gun construction used in America. The advantages of loading at the breech with heavy guns are numerous and great; but the serious mechanical difficulties (see BREECH-MECHANISM) of perfecting the movable breech attachment have militated against its adoption, especially in a country committed like the United States to the use of cast iron. During the half-decade (1855-60), and the succeeding decade (1860-70), enormous strides were made in gun construction and in that of carriages and projectiles, and the manufacture of gunpowder.

Cast Metal Guns.—The principles which govern the construction of homogeneous cast metal guns as established by long practice will be considered under the following heads:

Exterior Form.—The exterior of cannon is generally divided into five principal parts, viz.: the breech, the first reinforce, the second reinforce, the chase, and the swell of the muzzle.

The *breech* (see BREECH) is the thickness of metal in the prolongation of the axis of the bore, and should be at least equal to one and a quarter times the diameter of the bore; a less thickness has been found insufficient for heavy iron guns.

The *first reinforce* (see REINFORCE) extends from the base-ring to the seat of the ball, and is the thickest part of the piece, for the reason that the pressure of the powder is found to be greatest before the projectile is moved far from its place. In shape this reinforce was formerly made slightly conical, under the impression that the pressure was greater at the vent than at the seat

of the projectile; but it is now made cylindrical throughout. The thickness of bronze cannon at the seat of the charge is less than for iron guns.

The *second reinforce* (see REINFORCE) connects the first reinforce with the chase. It is made considerably thicker than is necessary to resist the action of the powder, in order to serve as a proper point of support for the trunnions, and to compensate for certain defects of metal liable to occur in the vicinity of the trunnions of all cast cannon, arising from the crystalline arrangement and unequal cooling of the different parts.

The *Chase* (see CHASE).—From the extremity of the second reinforce cannon taper more or less rapidly to the vicinity of the muzzle; this part called the chase constitutes the largest portion of the piece in front of the trunnions. The thickness of metal in the chase should be sufficient to resist the striking of the ball against the side of the bore. This injury being greater in bronze and soft iron guns, their taper is less than in cast-iron cannon. In the construction of bronze guns, the thickness of metal at the neck or thinnest part is about five-elevenths of that at the first reinforce. All projections on the surface of cannon not absolutely necessary for the service of the piece are omitted in cannon of late models. This omission simplifies their construction, renders them easier to clean, and obviates certain injurious strains that would otherwise arise from unequal cooling in fabrication.

Swell of the Muzzle.—The enlargement called swell of the muzzle was generally regarded as necessary, inasmuch as the metal situated immediately at the muzzle is supported only in rear, and it was thought necessary to increase its thickness in order to enable it to resist the action of the projectile at this point. At present, however, the tendency is to reduce the size of the swell of the muzzle and to omit it entirely on all sea-coast cannon.

Interior Form of Cannon.—The interior of a cannon may be divided into three distinct parts, viz.: the vent, or channel which communicates with the charge; the seat of the charge or chamber, if its diameter be different from the rest of the bore, and the cylinder, or that portion of the bore passed over by the projectile (see appropriate headings).

The *vent* (see VENT) is perpendicular to the axis of the piece, and the interior orifice is at a distance from the bottom of the chamber equal to a quarter of its diameter, or at the junction of the sides of the chamber with the curve of the bottom. Experiment has shown this position to be the most favorable to the full development of the force of the charge, and to be least injurious to the piece. The size of the vent should be as small as possible, in order to diminish the escape of the gas and the erosion of the

metal which results from it. In the U. S. service all vents are 0.2 inch in diameter. Experiment has, however, shown that the actual loss of force by the escape of the gas through the vent, as compared to that of the entire charge, is inconsiderable, and in practice may be neglected. In the U. S. service some pieces are made with two unbushed vents which are situated in two vertical planes on opposite sides of and parallel to the axis of the bore, and at a distance from it of one-half the radius of the bore. The left vent is bored entirely through, the other stops one inch short of the surface of the bore. When the open vent is too much enlarged by wear for further use, it is closed with melted zinc, and the other is bored out. Each vent is calculated to endure at least five hundred service rounds. In English guns of old model, the vent is placed four-tenths of the length of the cartridge from the bottom of the bore. In most breech-loaders, as well as many large modern muzzle-loaders, the vent is in the axis of the piece through the breech.

Seat of the Charge.—The form of the seat of the charge, or that part of the bore of a fire-arm which contains the powder, will have an effect on the force of the charge and the strength of the piece to resist it. The considerations most likely to affect the force of the powder are the form of the surface and its extent compared with the inclosed volume. To obtain the full force of the charge it is necessary that the inflammation be nearly completed before the gas begins to escape through the windage, and the projectile is sensibly moved from its place, and as the tension depends much upon the heat evolved by the combustion, the absorbing surface should be a minimum compared with the volume. In cannon where the charge of powder is large, the form of the seat of the charge is simply that of the bore prolonged; this arrangement, when compared with the chamber, makes the absorbing surface of the metal a minimum and reduces the length of the charge, so that its inflammation will be as complete as possible before the gas escapes and the projectile is moved. To give additional strength to the breech, and to prevent the angle formed by the plane of the bottom and sides of the bore from becoming a receptacle for dirt and burning fragments of the cartridge-bag, it is rounded with the arc of a circle, whose radius is one-fourth the diameter of the bore at this point. Instead of being a plane bottom it is sometimes made hemispherical, tangent to the surface of the bore. In all United States cannon of the most recent model, the bottom of the bore is a semi-ellipsoid; this is thought to fulfill the condition of strength more fully than the hemisphere. With light pieces, in which it is necessary to use small charges of powder, if the charge were made into a cartridge of a form to fit the bore its length would be less than its diameter, and being ignited at the top, a

considerable portion of the gas generated in the first instance of inflammation would pass through the windage, and a part of the force of the charge would be lost. To obviate this defect, to give the cartridge a more manageable form in loading, and to make the surface a minimum as regards the volume, the diameter of this part of the bore is reduced so as to form a chamber. The shape of the chambers of fire-arms is either cylindrical, conical, or spherical; the effect of these different forms of chambers on the velocity of the projectile will be modified by the size of the charge and the length of the bore. Up to a charge of powder equal to one-seventh of the weight of the projectile, and a length of bore equal to 9 or 10 calibers, experience shows that the presence of a chamber is advantageous, but beyond these it possesses no advantages to compensate for its inconvenience. For very small charges of powder and short lengths of bore, the cylindrical chamber gives better results than the conical chamber. For the same capacity, the conical chamber gives a shorter cartridge, and is therefore better suited to the rapid inflammation of a large charge of powder than the cylindrical chamber.

The Gomer chamber belongs to this class. (See GOMER CHAMBER.) The spherical chamber was formerly used particularly in mortars, but owing to the inconveniences which attend its construction and use, and its liability to deterioration, it is now entirely abandoned. In all the regulation guns of the U. S. land service, the bottom of the bore is a semi-ellipsoid. The adoption of this form simplifies the whole subject of chambers, and it is found to give increased ranges for small charges. No very careful experiments have been made to determine in a general way the effect of chambers on the strength of cannon; but late experience indicates that cylindrical chambers in heavy iron guns have an injurious effect on their endurance, and they have consequently been abandoned in these pieces.

The Bore (see BORE).—The length of the bore has an important effect on the velocity of the projectile, and it was formerly supposed that the longest pieces gave the greatest ranges; this belief was in a great measure due to the slow rate of burning of mealed powder, which was originally used in cannon, but was entertained even after gunpowder received its granular form. When a gun is discharged, the accelerating force is due to the expansive effort of the inflamed powder, which reaches its maximum when the grains of the charge are completely converted into vapor and gas. This event depends on the size of the charge, and the size and velocity of combustion of the grains. With the same accelerating force, the point at which a projectile reaches its maximum velocity depends on its density, or the time necessary to overcome its inertia. The retarding forces are:

(1) The friction of the projectile against the sides of the bore; this is the same for all velocities, but different for different metals.

(2) The shocks of the projectile striking against the sides of the bore; these will vary with the angle of incidence, which depends on the windage and the extent of the injury due to the lodgment and balloting of the projectile.

(3) The resistance offered by the column of air in front of the projectile; this force will increase in a certain ratio to the velocity of the projectile and length of the bore. As the accelerating force of the charge increases up to a certain point, after which it rapidly diminishes as the space in rear of the projectile increases; and as the retarding forces are constantly opposed to its motion, it follows that there is a point where these forces are equal, and the projectile moves with its greatest velocity; it also follows that after the projectile passes this point its velocity decreases, until it is finally brought to a state of rest, which would be the case in a gun of great length. Elaborate experiments have been made in this country and abroad to determine accurately the influence which the length of the piece exercises on the velocity of its projectile. The experiments made by Maj. Mordecai of the U. S. Ordnance Department with a 12-pounder gun, show that the velocity increases with the length of the bore up to 25 calibers; but that the entire gain beyond 16 calibers, or an addition of more than one-half to the length of the gun, gives an increase of only one-eighteenth to the effect of a charge of four pounds. It follows from the foregoing that the length of bore which corresponds to a maximum velocity depends upon the projectile, charge of powder, and material of which the piece is made, and taking the caliber as a unit of measure, it is found that this length is greater for small-arms which fire leaden projectiles than for guns which fire solid iron shot, and greater for guns than for howitzers and mortars, which fire hollow projectiles. For the same charge of powder it may be said that the initial velocity of a projectile varies nearly with the fourth root of the length of the bore, provided the variation in length be small.

Manufacture of Cannon.—Cannon for the U. S. service are made by private foundries. The material and product of the casting are under the supervision of an ordnance officer, who receives the pieces only after they have satisfied all the conditions imposed by the regulations of the service. There are several foundries for making cast-iron cannon. Wrought-iron field cannon are principally made at the Phoenixville Iron-Works, Pa. There are also several private establishments where special cannon are made. The several operations of manufacturing cannon are, molding, casting, cooling, and finishing.

Molding, in general terms, is the process by which the cavity of the form of the gun is obtained by imbedding a wooden model

in sand, and then withdrawing it. The wooden model is technically called the pattern, and the sand is confined in a box, which is divided into two or more parts for convenience in withdrawing the pattern. The pattern of the piece to be cast, somewhat enlarged in its different dimensions, is composed of several pieces of hard wood, well seasoned, or, for greater durability, of cast iron. The first piece of the model comprises the body of the piece from the base-ring to the chase-ring; the swell of the muzzle, and the sprue, or dead-head, are formed of the second piece; the breech, of the third; and the trunnions, of the fourth and fifth pieces. The sprue, usually called the "head," is an additional length given to the piece, for the purpose of receiving the scoria of the melted metal as it rises to the surface, and furnishing the extra metal needed to feed the shrinkage. Its weight also increases the density of the lower portion of the piece. The breech is slightly lengthened in the direction of the knob of the cascabel, to form a square projection by which the piece can be held when being turned and bored. The best material for the mold is dry, hard, angular, and refractory sand, which must be moistened with water in which strong clay has been stirred, to make it sufficiently adhesive; when not sufficiently refractory, the sand is vitrified by the high temperature of the melted metal, and protuberances—not easily removed—are formed on the casting. When not sufficiently coarse and angular, the materials cannot be so united as to preserve the form of the molds. The mold is formed in a case of cast iron, and termed the "box," or the "flask," consisting of several pieces, each of which has flanges perforated with holes for screw-bolts and nuts, to unite the parts firmly. To form the mold, the pattern for the sprue and muzzle, previously coated with pulverized charcoal or coke, moistened with clay-water to prevent adhesion, is placed vertically on the ground, muzzle part up, and carefully surrounded by the corresponding parts of the jacket. When properly adjusted, the sand, prepared as above, is rammed around it. The model for the body of the piece is then placed on the top of this, and the corresponding parts of the jacket correctly secured, and filled in succession with the molding composition. The patterns for the trunnions and rimbases are bolted to the model of the piece, and when the sand is rammed firmly around these, the bolts are withdrawn, this part of the mold completed, and the end-plates screwed on. After completing the mold for the body of the piece, the model for the cascabel is properly adjusted and the mold completed. Care is taken to cover each portion of the model with the coke-wash mentioned above, and to sprinkle dry sand upon the top of the mold in each piece of the jacket, to prevent adhesion, so that the portions of the mold may be separated. In the

body of the sand, a channel for the introduction of the metal is formed in the same manner as the mold cavity. It enters at the bottom of the mold, to prevent the bottom from being injured by the falling metal, and in an oblique direction, to give a circular motion to the metal as it rises in the mold, and thereby prevent the scoria from adhering to the sides. When the mold is completed, the parts of the flask are carefully taken apart, and the pieces of the model withdrawn from the mold contained in them. If any portions of the mold be injured in withdrawing the model, they are repaired, and the interior of the mold is covered with coke-wash; after which the several parts are placed in an oven to be gradually and perfectly dried. When this is accomplished, the parts are carried to a pit, where they are united and secured in a vertical position, with the breech below. Any portion of the sand broken off during the movements and adjustments should be replaced, and the whole of the interior covered with coke-wash. The object of coke-wash is to prevent the sand from adhering to the melted metal, which, when prepared, is made to flow in at the entrance of the side-channel. As the metal rises in the mold, a workman agitates it with a long pine stick, to cause the scoria and other impurities to rise to the surface, and brings them toward the centre of the mold, to prevent their entering the cavities for the trunnions.

Cooling.—After the mold is placed properly in the pit, it is usual to surround the box with sand, at least as high as the trunnions of the gun. This is done to prevent rapid cooling. With guns as heavy as 24-pounders, this sand is not removed for three days, and as the gun is heavier the time is prolonged, and is from seven to eight days for the 10-inch columbiad. At the proper time the sand is removed, and the gun, still imbedded in the box and sand of the mold proper, is hoisted out, the box taken off, and when nearly cold, the gun cleaned of the sand.

Boring and Turning.—A cannon is bored by giving it a rotary motion around its axis, and causing a rod armed with a cutter to press against the metal in the proper direction. The piece, supported in a rack, is carefully adjusted, with its axis horizontal, and made to revolve on this axis by machinery attached to the square knob on the cascabel. After adjustment, the sprue-head is first to be cut off. This is effected by placing a cutter opposite the point at which the section is to be made, and pressing it against the metal whilst the piece is turning. The head being cut off, and the cutter removed, the boring is commenced by placing the boring-rod, armed with the first cutter, called the piercer, in the prolongation of the axis of the piece, and pressing it against the metal. The piercer is used till it penetrates to the bottom of the chamber, after which a second cutter, or reamer, is attached to the boring-rod, and with this the boring is made

complete to the round part of the chamber. The reamer is then removed and its place supplied by the chamber-cutter, which gives the necessary form and finish to that part of the bore. In hollow-cast cannon the piercer is dispensed with. Whilst the boring is taking place the workman contrives to finish the turning of all the exterior of the piece except the portion between the trunnions, which is afterwards planed off in another machine. These operations having been completed, the piece is placed in the trunnion-machine, and the trunnions are turned down to the proper size. Care is taken to make the trunnions of the same diameter, and perfectly cylindrical. Their axes should be in the same right line, perpendicular to the axis of the piece and intersecting it.

Boring the Vent.—Whilst in the trunnion-lathe, the axis of the piece is inclined to the horizon at the angle the vent is to make with it. A drill is placed vertically over the point where the vent is to be bored, and pressed against the metal whilst a rotary motion is given to it by hand or machinery. The time required to finish a cannon, ready for inspection, depends upon its size, or from three to four weeks for a 24-pounder gun, and six weeks for an 11-inch gun.

Cast Metal Guns, Modern Improvements in.—The first great step in this direction was taken by Gen. Rodman of the U. S. Ordnance Corps. It was his investigation into the crystallization of cast iron which led to the abolition of sharp angles or projections in the form of cannon. His reputation, however, rests mainly upon the principle of *hollow casting*. The general form of the old casting is that of a *solid frustum* of a cone; it is therefore cooled from the exterior, which causes the thin outer layer to contract first, and forces the hotter and more yielding metal within towards the opening of the mold. Following this the adjacent layer cools and tends to contract, but the exterior layer to which it coheres has become partially rigid and does not fully yield to the contraction of the inner layer. The result is, the cohesion of the particles of the inner layer is diminished by a force of extension, and that of the outer layer increased by a force of compression. As the cooling continues this operation is repeated, until the whole mass is brought to a uniform temperature, and the straining force is increased to an extent which depends on the size and form of the mass, the rapidity with which it is cooled, and the contractibility of the particular metal used. The foregoing considerations led Rodman to cast the gun hollow and to cool it from the interior, to reverse the strains by external cooling, and make them contribute to the endurance rather than to the injury of the piece. The method employed is to carry off the internal heat by passing a stream of water through a hollow core, inserted in the centre of the mold cavity before casting, and to surround the flask with a mass of burning coals, to prevent too rapid radiation from the

exterior. Results show that cast-iron cannon made by this plan are not only stronger, but are less liable to enlargement of the bore from continued firing. All large American guns of cast iron, including the cases for the experimental rifles, are now cast on the Rodman plan. The plan has also been adopted by most of the nations of Europe that use cast-iron guns,—France, Sweden, Italy, etc.

For improvements in *bronze*, see the methods of Dean and Uchatius, *ORDNANCE, METALS FOR*.

The following are among the best known of cast metal homogeneous guns:

Columbiad.—The columbiads are a species of sea-coast cannon containing certain qualities of the gun, howitzer, and mortar; they are long, chambered pieces capable of projecting solid shot and shells with heavy charges of powder, at high angles of elevation. The columbiad was invented by Col. Bomford, late of the U. S. service; the model was afterwards changed by lengthening the bore and increasing the weight of metal. ~ (See *ORDNANCE, HISTORY OF*.) It was afterwards discovered that these pieces did not possess the requisite strength, and they were degraded to the rank of shell guns, and their places supplied by pieces of improved model. The change consisted in giving greater thickness of metal in the prolongation of the axis of the bore, which was done by diminishing the length of the bore itself; in substituting a hemispherical bottom to the bore, and removing the cylindrical chamber; in removing the swell of the muzzle and base-ring, and in rounding off the corner of the breech. In 1860 the model prepared by Capt. Rodman was adopted for all sea-coast cannon, and is essentially the same as the one described below.

Paizhan Gun.—See *ORDNANCE, HISTORY OF*.

Dahlgren Gun.—The guns constructed after the plan of Admiral Dahlgren of the U. S. navy, are used principally in the U. S. sea service. Those of large caliber are made of cast iron, solid, and cooled from the exterior. To produce uniformity in the cooling, the piece is cast nearly cylindrical, and then turned down to the required shape. The thickness of the metal around the seat of the charge is a little more than the diameter of the bore, as is true of nearly all the cast-iron guns. The chase, however, tapers more readily than in other cast-iron guns; they are smooth-bored, and the chamber is of the Gomer form. The principal guns of this system are of 9- and 11-inch caliber. A piece of 10-inch caliber has, however, been introduced into the navy for firing solid shot. The 16- and 20-inch naval guns are shaped exteriorly after the Dahlgren pattern, but are cast hollow, and have the elliptical chamber of the Rodman system.

Napoleon Gun.—A bronze field-piece in the U. S. service. See *NAPOLÉON GUN*.

Rodman Gun.—The principal difficulty formerly experienced in manufacturing very

large cast-iron cannon was the injurious strain produced by cooling the casting from the exterior. Gen. Rodman of the U. S. Ordnance Department developed a theory of the strains produced by cooling a casting like that of a cannon (see *ORDNANCE, STRAINS UPON*), and as a remedy for them proposed that cannon should be cast with a hollow core and cooled by a stream of water or air passing through it. This new mode of casting was afterwards adopted by the War Department. By this system of casting, guns of greatly-increased size and endurance are fabricated. The largest guns employed in the U. S. service (20-inch) are made on the Rodman plan, as well as the 15-inch, 13-, 10-, 8-inch, etc. The external form of Rodman guns is striking, as they are much larger at the seat of the charge than elsewhere. Their outline is made up of curved lines. This form has been almost universally adopted for U. S. guns. The Dahlgren, which preceded it, has nearly the same shape.

The great power demanded at the present day in heavy ordnance, however, cannot be attained by the use of cast iron alone. The difficulties of constructing homogeneous guns of the stronger metals—wrought iron and steel—have given birth in modern times to

Built-up Guns.—The term “built-up” is applied to those cannon in which the principal parts are formed separately, and then united together in a peculiar manner. One object of this mode of manufacture is to correct the defects of one material by introducing another of opposite qualities, as for instance, trials have been made to increase the hardness, and therefore endurance, of bronze cannon by casting them around a core of steel which formed the surface of the bore. Built-up cannon are not necessarily composed of more than one kind of metal. Some of the most noted are made of steel or wrought iron alone. In this case the defects which we have seen accompany the working of large masses of wrought iron (crystalline structure, cracks, false welds) are obviated by first forming them in small masses, as rings, tubes, etc., of good quality, and then uniting them separately. The mode of uniting a built gun may be by welding the parts, by shrinking, or forcing one over the other, or by screwing them together.

In the construction of built-up guns, makers have aimed at the ideal gun which has its strength proportioned to the strain it is called upon to bear in all its parts. All parts of the sides of a cannon are not strained equally, and are therefore not brought to the breaking-point at the same time. Any arrangement of the parts by which the explosive strain is distributed equally over the entire thickness of the piece, necessarily brings a greater amount of resistance into play to prevent rupture. There are two general plans for accomplishing this, viz.: First, by producing a strain of compression on the metal nearest the surface of the bore. This is

termed an "initial strain," and is brought about by shrinking heated bands or tubes around the part to be compressed, or by slipping a tube into the bore, which has been slightly enlarged by heat. In either case it is apparent that the extent of the strain depends on the relative size of the fitting surfaces, and the amount of heat used to produce expansion. Sometimes the parts are forced together by hydraulic pressure after they have been carefully bored and turned to the proper size. The second plan is based on "varying elasticity," and is accomplished by placing that metal which stretches most within its elastic limit around the surface of the bore, so that by its enlargement the explosive strain is transmitted to the outer parts. By the selection of suitable materials and their proper management, both of these plans may be combined in the same gun, and thereby give it increased strength. See **ORDNANCE, CONSTRUCTION OF**.

The best-known cannon of the *built-up* class are:

Ames Gun.—The rifled guns made by Mr. Horatio Ames, of Falls Village, Conn., are made of wrought iron on the built-up principle. The wrought iron is in the form of rings, made by bending a bar around a mandrel and welding the ends. After turning them in a lathe, two or more of these rings are fitted one within another to form a disk. These disks are welded in succession to a concave breech-piece. Some of these guns have shown remarkable endurance. They are weakest against longitudinal strains.

Armstrong Gun.—Is so much like the *Woolwich*, which it preceded, that a separate description is unnecessary. See **WOOLWICH GUN**.

Blakely Gun.—The most approved pattern of the gun invented by Capt. Blakely combines in its construction the principles of "initial tension" and "varying elasticity," the object of which is to bring the strength of all the metal of the piece into simultaneous play to resist explosion. It is made of several tubes or barrels, the inner one of which is of low steel, having considerable but not quite enough elasticity. The next tube is made of high steel with less elasticity, and is shrunk on the barrel with just sufficient tension to compensate for the insufficient difference of elasticity between the two tubes. The outer cast jacket, to which the trunnions are attached, is the least elastic of all, and is put on with only the shrinkage by warming it over a fire. The steel tubes are cast hollow and hammered over steel mandrels under steam-hammers; by this process they are elongated, and at the same time the tenacity of the metal is increased, all the steel parts are annealed. Other combinations of iron and steel are used, except wrought iron, which is regarded as objectionable on account of its tendency to stretch permanently. Blakely guns were rifled with one-sided grooves, and are fired with expanding projectiles. This gun is no longer made

under that name. As now made it is called the

Vavasour Gun, and is manufactured by Messrs. J. Vavasour & Co. of the London Ordnance-Works. It is made entirely of the best Sheffield cast steel, except the trunnions, which are wrought iron, and consists of an interior tube and outer tube and a number of hoops. The inner tube is forged from a solid ingot. It is rough bored and turned and then oil tempered. The outer tube and rings are cast hollow and hammered over steel mandrels. They are heated and shrunk on. Theoretically, it is difficult to pick a flaw in the construction of this gun. The rifling used is anomalous. It consists of three *ribs* instead of grooves projecting into the bore. The projectile has corresponding grooves. These guns have found quite a market in the South American republics.

Brooke Gun.—This gun was made after the plan of Capt. Brooke for the Confederate service; it resembles Parrott's in shape and construction, except that the reinforcing band is made up of iron rings not welded together. The rifling is similar to that used in the Blakely guns.

Fraser Gun.—See **WOOLWICH GUN**.

Gatling Gun.—See **GATLING GUN**.

Krupp Gun.—See **KRUPP GUN**.

Lancaster Gun.—This gun is now little used; it was made of wrought iron. The bore was cut in a spiral form with an elliptical cross-section, and the projectile shaped to fit it, by which means a rotary motion was imparted.

Palliser Gun.—Maj. Palliser of the British service is the inventor of a system which has been successfully applied in England to utilize smooth-bore cast-iron guns by converting them into rifles. By his plan the gun is first bored to a cylinder or finely tapering cone, then lined with a tube of coiled wrought iron, the breech end of which is shrunk on; the exterior of the barrel has a uniform diameter throughout. The tube is double at this part to obtain the benefit of the tension and to enable any fracture of the inner layer to be made known without bursting the gun. The bottom of the barrel is closed by a wrought-iron cup screwed in. The tube is inserted into the gun from the muzzle without the application of heat. A small amount of play is allowed between the barrel and the cast-iron body; this disappears, or is much reduced by a "setting up charge," which expands the barrel against the cast iron. The end of the barrel is made to bear accurately against the cast-iron breech. A collar screwed into the muzzle secures the tube in position, and prevents it from being thrust forward by the compression of the metal by repeated firing. In front of the trunnions a pin is screwed in through the cast iron, to resist the tendency of the tube to be turned by the bearing of the projectile in the grooves. On the exterior of that portion of the inner tube that is covered by the second tube is cut a spiral gas

channel; this communicates with a tell-tale hole drilled through the cast-iron breech, by which gas can escape and announce the fracture of the inner tube. The venting and rifling are similar to those employed in the Woolwich guns. In the larger guns Maj. Palliser proposes to use two or more concentric tubes, in some the exterior one to be of steel. This system is being applied in the United States with the most promising results in the conversion of 10-inch Rodman guns into 8-inch rifles. The rifles thus obtained, though giving to a projectile a less muzzle velocity than does the 10-inch smooth-bore, has, on account of the increased weight of shot, greater penetrating power at all ranges, being doubled at some and trebled at others. Its accuracy is three times greater, and the capacity of its shell twice that of the original gun.

Parsons Gun.—The system upon which Mr. Parsons makes his guns is similar to that of Maj. Palliser. (See PALLISER GUN.) It depends upon the principle of varying elasticities, and is based upon the fact that wrought iron may be stretched three times as much as cast iron, and will offer three and a half to six times the resistance within the limit of its elasticity. These well-known gun constructions, known as *converting systems*, both consist in lining a cast-iron case with a wrought-iron or steel tube. In the Palliser or English method the tube is inserted from the muzzle. In the Parsons or American method, through the breech. In both nearly the whole of the longitudinal strain is transferred to the cast-iron case. Both systems were first perfected in England. Col. Crispin (U. S. Ordnance Corps) deserves the credit of introducing them into the U. S. service in constructing the new *experimental rifles*. The Parsons system is better adapted to constructing breech-loaders.

Parrott Gun.—The Parrott rifled gun is a cast-iron piece of about the usual dimensions, strengthened by shrinking a coiled band or barrel of wrought iron over that portion of the reinforce which surrounds the charge. The body of the larger Parrott guns are cast hollow, and cooled from the interior on the Rodman plan. The barrel is formed by bending a rectangular bar of wrought iron spirally around a mandrel, and then welding the mass together by hammering it in a strong cast-iron cylinder, or tube. In bending the bar, the outer side being more elongated than the inner one, is diminished in thickness, giving the cross-section of the bar a wedge shape, which possesses the advantage of allowing the cinders to escape through the opening, thereby securing a more perfect weld. The barrel is shrunk on by the aid of heat, and for this purpose the reinforce of the gun is carefully turned to a cylindrical shape, and about one-sixteenth of an inch to the foot larger than the interior diameter of the barrel in a cold state. To prevent the cast iron from expanding when the barrel is slipped on to its

place, a stream of cold water is allowed to run through the bore. At the same time, and while the band hangs loosely upon it, the body of the gun is rotated around its axis to render the cooling uniform over the whole surface of the barrel. The proof of the Parrott guns consists in firing each piece 10 rounds with service charges.

Rodman Gun.—The principal difficulty formerly experienced in manufacturing very large cast-iron cannon was the injurious strain produced by cooling the casting from the exterior. Gen. Rodman of the U. S. Ordnance Department developed a theory of the strains produced by cooling a casting like that of a cannon (see ORDNANCE, STRAINS UPON), and as a remedy for them proposed that cannon should be cast on a hollow core and cooled by a stream of water or air passing through it. This new mode of casting was afterwards adopted by the War Department. By this system of casting, guns of greatly increased size and endurance are fabricated. The largest guns employed in the U. S. service (20-inch) are made on the Rodman plan, as well as many of the guns employed in the field service.

Whitworth Gun.—These guns are made of a species of low steel; the smaller are forged solid, the larger are built up with coils or hoops; the hoops are forced on by hydraulic pressure, and for this purpose are made with a slight taper and with the design to secure initial tension. The ends of the hoops are joined by screw-threads. The hoops are first cast hollow, and then hammered out over a steel mandrel. Before receiving their final finish they are subject to an annealing for some three or four weeks, which makes the metal very ductile, but at the same time slightly impairs its tenacity. The system differs from Krupp's in the smaller masses used and the greater number of hoops. The process for making the hoops is better calculated to develop their tensile strength. The breech-pin is made with offsets in such a way as to screw into the end of the barrel and the next two surrounding hoops. The cross-section of the bore of the Whitworth gun is a hexagon with rounded corners. The twist is very rapid and the projectiles are made very long.

Woodbridge Gun (invented by Dr. Woodbridge, of Little Falls, New York).—The system of construction consists essentially of a thin steel barrel over which wire is wound, barrel and wire being subsequently consolidated into one mass by a brazing solder melted and poured into the interstices. The following brief description is extracted from one of the inventor's letters to the chief of ordnance: "Square wire is wound upon a steel core somewhat longer than the intended bore of the gun, a sufficient number of wires being wound at once side by side to produce the required obliquity of the turns. The successive layers have opposite twists. When the mass has reached the required dimensions, it is inclosed in an air-tight case

to protect it from oxidation, and is heated therein to a temperature somewhat above that required for the fusion of the soldering metal. The soldering metal having been melted is run in, filling all the interstices of the mass. When cooled the gun is bored and finished as usual." The invention dates back to about 1850. A small gun made in this way was tested by Maj. Laidley (U. S. Ordnance Corps) in 1865. It endured 1827 rounds with excessive charges, when the attempt to burst it was abandoned on account of the breaking off of the trunnions. The only large gun ever made—a 10-inch gun—was fabricated at Frankford Arsenal. It was not entirely finished till April, 1876, soon after which it was displayed at the Centennial Exhibition in Philadelphia. Certain defects in its manufacture prevent it from fairly representing the Woodbridge system.

Woolwich Gun.—The Woolwich or Fraser gun is in its construction a modification of the Armstrong plan, which latter had been previously used in Great Britain; the principal difference is in substituting for a number of single coils and a forged breech-piece a few long double and triple coils, and in using a cheaper quality of wrought iron. The number of pieces employed in the construction depends upon the size of the gun; an 8-inch rifled gun is composed of the inner tube (barrel) of steel, the muzzle-coil (trousers), the breech-coil (jacket), and the cascabel-screw. The barrel is made from a solid forged cylinder of cast steel, drawn by heating and hammering; it is turned, bored, and chambered; then heated to a uniform temperature in a vertical furnace and plunged into a covered tank of rape-oil, where it cools and soaks. The muzzle-coil is constructed of two single coils welded together endways. Each coil is formed by heating a long bar and wrapping it about a mandrel; this is next heated in a reverberatory furnace and welded under a steam-hammer. Before being united the two cylinders are turned and bored. The breech-coil is composed of a triple coil, a trunnion-ring, and a double coil welded together. The double coil is formed by placing a single coil, when cold, on a mandrel and winding over it, but in the reverse directions to break joints, a second bar; if over this a third bar is immediately wound in the same direction as the first, a triple coil will result. These coils are welded by being heated and hammered on the end and on the sides. The trunnion-ring is made by welding slabs of iron together on the flat end of a bar, and gradually forming a ring by driving through the centre wedges and mandrels increasing in size; the trunnions, one of which comes from the bar, are at the same time hammered into shape. The coils and the ring having been turned and bored, the latter is placed on a shoulder of the triple coil, the double coil is dropped through the trunnion-ring on the triple coil, and the joints welded in this position. The cascabel is forged of good

scrap-iron; the different parts having been formed are accurately turned and bored with a slight taper. The muzzle-coil tube being heated is dropped over the barrel, which is stood in a pit, a stream of cold water circulating through the bore. The half-formed gun is then placed on its muzzle, water forced through the bore, and the breech-coil heated and slipped into position. The cascabel is screwed into the breech-coil abutting against the barrel, great care being taken that the contact is perfect. A tell-tale hole is cut along the thread on the cascabel to give warning by the escape of gas should the barrel break in firing. The vent is bored through hardened copper; it enters near the centre of the service cartridge. This gives greater velocity, but also greater pressure. The large guns have from seven to ten grooves. The twist is uniformly increasing; the shape of the grooves is circular, with curved edges.

Sutcliffe Gun.—This invention, by E. A. Sutcliffe of New York City, relates to a breech-mechanism for cannon. See **BREECH MECHANISM**.

Griffin Gun.—Name sometimes given to the 8-inch rifled field-piece in the U. S. service. It is made of wrought iron. The method of fabrication is to wrap boiler-plate around a mandrel and to weld it.

Ordnance, Metals for. The only metals ordinarily used for cannon are cast and wrought iron, steel, and an alloy of copper and tin, or a combination of these metals. Cannon metals should be able to resist the corroding action of the atmosphere, the heat and the products of combustion of the powder; should be susceptible of being easily bored and turned, and should not be too costly. The qualities necessary in cannon metals are strength to resist the explosion of the charge, weight to overcome severe recoil, and hardness to endure the bounding of the projectile along the bore. The shape of the bore would otherwise be rapidly altered by the action of the projectile. This quality is particularly necessary in rifled cannon. The term strength as applied to cannon metal is not confined to tensile strength alone, but embraces also elasticity, ductility, and crystalline structure, which affect its power to resist the enormous and oft-repeated force of gunpowder. (See **ORDNANCE, STRAINS UPON**.) Each discharge of a cannon, however small, impairs its strength, and repeated a sufficient number of times, will burst it; this arises from the fact that the feeblest strains produce a permanent elongation or compression of iron; this is technically known as the permanent set, and the same is probably true of all other metals. The property of ductility is of importance in enabling a metal to resist rupture after it has passed its elastic limit. The size and arrangement of the crystals of a metal have an important influence in its strength to resist a particular force. A metal will be strongest when its crystals are small, and

the principal faces parallel to the straining force, if it be one of extension, and perpendicular to it, if it be one of compression. The size of the crystals of a particular metal depends on the rate of cooling; the most rapid cooling giving the smallest crystals.

Cast iron is very generally employed, notably in the United States, in the fabrication of heavy cannon for siege and sea-coast purposes. It possesses the very important qualities of tenacity, hardness, and cheapness, and with proper care is not seriously affected by rust. Its principal defect is an almost entire want of elasticity, in consequence of which its tenacity is destroyed after a certain number of applications of the straining force. But little is known of the causes which affect the quality of the cast iron used for cannon metal. The amount of carbon, the state of its combination, together with the ore, fuel, and fluxes, and the process of manufacture, all materially affect the quality of the iron. All that is known is, that certain ores treated in a certain way make cast iron suitable for cannon, and the fitness of a particular kind of cast iron for artillery purposes can only be determined by submitting it to the tests of the service. After this is known, a knowledge of certain physical properties, such as tenacity, hardness, density, and color, form and size of crystals presented in a freshly fractured surface, will be useful in keeping the metal up to the required standard. The pig-iron from which cannon are made should be soft, yielding easily to the file and chisel; the appearance of the fracture should be uniform, with a brilliant aspect, dark gray color, and medium-sized crystals. When remelted and cast into cannon, it should have about sufficient hardness to resist the file and chisel, but not to be so hard as to be bored and turned with much difficulty; its color should be a bright gray, crystals small, structure uniform, close, and compact. The density of gun metal should be about 7.25, and its tenacity about 30,000. There are several varieties of cast iron differing from each other by almost insensible shades. The principal divisions are, however, gray and white. Gray iron is softer and less brittle than the white, is slightly malleable and flexible, and does not resist the file. It has a brilliant fracture of a gray or bluish-gray color. This iron melts at a lower temperature than white iron and becomes more fluid, contracts less and contains fewer cavities; it fills the mold well, the edges of a casting are short, and the surface smooth, convex, and covered with carburet of iron. Gray iron is the only kind suitable for making castings which require great strength, such as cannon. White iron is very brittle, resists the file and chisel, and is susceptible of high polish, the surface of a casting is concave, the fracture presents a silvery appearance. Its qualities are the reverse of those of gray iron; it is therefore unsuitable for ordnance purposes. Mottled iron is a mixture of white and gray; it has

a spotted appearance, and flows well. The casting has a plane surface with edges slightly rounded. It is suitable for making shot and shells. Besides these general divisions, there are several other varieties of iron whose qualities depend upon the proportion of carbon, and the state in which it is found in the metal. The color and texture of cast iron depend greatly on the size of the casting and the rapidity of cooling. See *ORDNANCE, STRAINS UPON*.

Wrought iron was among the earliest metals employed in the construction of cannon, but in consequence of the defects which almost invariably accompany the forging of large masses, it was superseded by bronze and cast iron to a great extent. Wrought iron is softer than cast iron, and, being pure iron, is more liable to be corroded by the action of the atmosphere and products of combustion of the powder; it possesses also considerable ductility. The tensile strength of wrought iron, which under the most favorable circumstances is double that of the best cast iron, depends on the character of the crystalline structure, and the manner of applying the tensile force, or in other words, wrought iron offers the greatest resistance to a force of extension when the structure is fibrous, and the force acts in the direction of the fibres. The practical difficulties of rapidly cooling large masses so as to form small crystals, and compressing them by hammering, rolling, or otherwise to develop and give a particular direction to the fibre, have not thus far been wholly surmounted. On the contrary, large masses are generally found to contain such internal defects as false welds, cracks, and a spongy and irregularly crystalline structure, arising from the more rapid cooling of the exterior surface.

Steel is a compound of iron and carbon, in which the proportion of the latter seldom exceeds 1.7 per cent. It may be distinguished from iron by its fine grain, its susceptibility of hardening by immersing it when hot in cold water, and with certainty by the action of diluted nitric acid, which leaves a black spot on steel, and on iron a spot which is lighter colored in proportion as the iron contains less carbon. For the construction of cannon, steel may be divided into high and low steel, the difference being that the former contains more carbon than the latter. High steel is very hard and has great ultimate tenacity. It has but little extensibility within or without the elastic limit, and is therefore too brittle for use in cannon, unless used in such large masses that the elastic limit will not be exceeded by the explosive force of the powder. It melts at a lower temperature than wrought iron and is difficult to weld, as its welding temperature is but little less than that at which it melts. Low steel is often known as "mild steel," "soft steel," "homogeneous metal," and "homogeneous iron," and is made by fusing wrought iron with carbon

in a crucible; after which it is cast into an ingot and worked under a hammer. As it contains less carbon than high steel, it has greater specific gravity. It can be welded without difficulty, although overheating injures it. It more nearly resembles wrought iron in all its properties, although it has much greater hardness and ultimate tenacity, and a lower range of ductility depending on its proportion of carbon. It has less extensibility within the elastic limit than high steel, but greater beyond it, or in other words, greater ductility. Its great advantage over wrought iron for general purposes is that it can be melted at a practicable heat, and run into large masses possessing soundness and tenacity. Its advantages for cannon are greater elasticity, tenacity, and hardness. Its tenacity when suitable for cannon is three times as much as cast gun iron, and one-half more than the best wrought iron. The principal varieties of steel are:

Natural Steel.—This is made principally in Germany, and is used for making files and other tools. It is obtained by reducing the rich and pure kinds of iron ore with charcoal, and re-fusing the cast iron so as to bring it to a malleable state. The India steel, or Wootz, is a natural steel containing a small proportion of other metals.

Blistered Steel.—This is prepared by exposing alternate layers of bar-iron and charcoal in a close furnace for several days. When taken out the bars are brittle in quality and crystalline in appearance. The purpose for which the steel is to be used determines the degree of carbonization. The best qualities of iron (Russian and Swedish) are used for the finest kind of steel.

Tilted Steel.—This is blistered steel moderately heated and subjected to the action of a tilt-hammer, by which means its density and tenacity are increased.

Shear Steel.—A blistered or natural steel refined by piling thin bars into fagots, and then rolling or hammering them into bars, after they have been brought to a welding heat in a reverberatory furnace. The quality is improved by a repetition of this process, and the steel is known accordingly by the names, half shear, single shear, double shear, etc.

Cast Steel.—This is made by breaking blistered steel into small pieces, and melting it in close crucibles from which it is poured into iron molds. The ingot is then reduced to a bar by hammering or rolling with great care. Cast steel is the finest kind of steel, and is best adapted for most purposes; it is known by a very fine, even, and close grain, and a silvery homogeneous fracture. The most remarkable specimen of cast steel for tenacity which is on record was manufactured at Pittsburgh, Pa. It was tested at the Washington Navy-Yard, and found to sustain 242,000 pounds to the square inch. The strength of cast steel usually runs from 70 to 140,000 pounds.

Bessemer Steel.—This steel is produced by forcing air into melted iron, by means of which the carbon and silicon of the crude cast iron is oxidized. The essential difference between this process and the ordinary puddling is mechanical, and consists in the intense and violent stirring of the Bessemerized iron, to which alone is due the production and maintenance of a temperature, without any other fuel than the carbon and silicon contained, that keeps the metal fluid so that it can be cast into homogeneous malleable ingots. When decarburization has been carried far enough, the current of air is stopped, and a small quantity of white pig-iron containing a large amount of manganese is dropped into the liquid metal. No very large cannon have yet been made wholly of Bessemer steel, but several small ones have, which have shown great endurance. Experiments at the Woolwich Arsenal have shown that the tenacity of this steel is more than doubled by hammering.

Siemens-Martin.—In this process the ingredients of cast steel are melted together on the open hearth of a reverberatory furnace of special construction, and a certain proportion of manganese necessary to make a sound and practically malleable steel added. This steel is, however, little used in gun construction.

Semi-Steel.—If in the process of puddling or decarbonizing cast iron the process be stopped at a particular time, determined by indications given by the metal to an experienced eye, an iron is obtained of greater hardness and strength than ordinary iron, to which the name of semi-steel, or puddled steel, has been given. The principal difficulty in its manufacture is that of obtaining uniformity in the product, homogeneity and solidity throughout the entire mass. It is much improved by reheating and hammering under a heavy hammer; but it has not been found a reliable material for even cannon of small caliber. The celebrated guns made by Mr. Krupp of Germany are of cast steel, made from puddled steel, and of peculiar character, combining great tensile strength with the property of stretching to a great extent without breaking. Sir Joseph Whitworth improves the qualities of steel for his more recent guns by casting it under hydraulic pressure.

Chrome Steel.—An alloy of iron and chromium, which is not steel in the ordinary sense, but which possesses many of its characteristics. The tensile strength and resistance to crushing is much higher than ordinary cast steel. This material has been largely used in bridge-building, but has not yet been applied to cannon-making.

Bronze for cannon (commonly called brass) consists of 90 parts of copper and 10 of tin, allowing a variation of one part of tin more or less; by increasing the proportion of tin, bronze becomes harder, but more brittle and fusible; by diminishing it it becomes too soft for cannon, and at the same time loses a part

of its elasticity. Bronze is more fusible than copper, much less so than tin. It is harder, less susceptible of oxidation, and much less ductile than either of its constituents. Its fracture is of a yellowish color, with little lustre, a coarse grain, irregular, and often exhibiting spots of tin which are of a whitish color. The density and tenacity of bronze when cast into the form of cannon, are found to depend upon the pressure and mode of cooling. In consequence of the difference of fusibility of tin and copper, the perfection of the alloy depends much on the nature of the furnace and the treatment of the melted metal. By these means alone the tenacity of bronze has been carried up to 60,000 pounds. Bronze is but slightly corroded by the action of the gases evolved from gunpowder, or by atmospheric causes; but its tin is liable to be melted away at the sharp corners by the great heat generated in rapid firing. It is soft, and therefore liable to serious injury by the bounding of the projectile in the bore. This injury is augmented as the force of the rebound is increased by the elasticity of the metal. It was established by experiments of Maj. Wade of the U. S. Ordnance Corps more than twenty years ago that the tensile strength of bronze is related to its density. It has been discovered since that this density can be produced by artificial compression. Two men claim the honors of the invention—Gen. Uchatius of the Austrian army, and S. B. Dean, an American inventor. The methods are essentially the same. After the gun is cast, steel mandrels slightly conical in shape are driven through the bore by hydraulic pressure,—each being succeeded by one slightly larger,—thus enlarging the bore and compressing the metal surrounding it. It is claimed that the bronze is thus rendered harder and stronger, and the defects above cited in a large measure obviated. The term “steel bronze” or “bronze steel” has been applied to the metal so treated. Many guns have been made of it for the Austrian service,—the largest of which is a 6-inch breech-loader throwing a projectile of 85 pounds. This gun has proved itself slightly superior in power to the same sized Krupp gun of steel.

Aluminium Bronze.—An alloy of 90 parts of copper and 10 of aluminium. It is harder than ordinary bronze; much stronger, being 100,000 pounds to the square inch; it does not tarnish readily. Its properties would seem to especially fit it for a gun metal. *Phosphor bronze* is an alloy with very similar properties.

Combined Metals.—Numerous trials have been made to improve the strength of cannon by combining two or more metals in such a way that the good qualities of one will counteract the defects of the others. But the only metals used to any extent are those described above. Steel is constantly gaining in favor as a cannon metal. It is now almost exclusively employed throughout Europe, and wherever the Krupp gun is

used. The great perfection arrived at by Krupp and others in the manufacture of steel seems to place that metal above all others for gun construction, whilst the difficulty of handling large masses has been overcome by the enormous power of the machinery used. Steel is also sparingly employed both in the United States and England for converting smooth-bore guns into rifles according to the Palliser method, but experiments in the United States have shown that it is inferior to wrought iron for this purpose. See *ORDNANCE, CONSTRUCTION OF*.

Wrought and cast iron are much used in this way for cannon in both the United States and in England. In the former, all the larger cannon belonging to the official system (both siege and sea-coast) are made of the cast metal, whereas the Parrott gun and the new rifled pieces are a combination of both. (See *ORDNANCE, CONSTRUCTION OF*.) The metal chiefly employed in England is wrought iron, in combination with steel; the largest guns made at the Woolwich Arsenal are of this nature. Bronze, except as modified by the Austrians, has now nearly entirely gone out of use as a cannon metal. In France and the United States, field-pieces, mortars, and howitzers are still made of this material.

Ordnance, Strains Upon. The exterior form of cannon is determined by the variable thickness of the metal which surrounds the bore at different points of its length. In general terms, the thickness is greatest at the seat of the charge, and least at or near the muzzle. This arrangement is made on account of the variable action of the powder and projectile along the bore, and the necessity of disposing the metal in the safest and most economical manner. The pressure at different points may be approximately determined by calculation, or, more accurately, by experiment. In the latter method, the plan generally employed consists in boring a series of small holes through the side of a gun at right angles to its axis at known distances apart. A steel ball is projected from each hole in succession into a target, or ballistic pendulum, by the force of the charge acting through it, and the pressure at the various points is deduced from the velocities communicated to these balls. This method was adopted by Col. Bomford. Instead of the projectile a steel punch may be employed, which is pressed by the force of the charge into a piece of soft copper. (See *PRESSURE-GAUGE*.) The weight necessary to make an equal indentation in the same piece is then ascertained by a testing machine. The strains to which all fire-arms are subjected may be classified as follows: (1) The tangential strain which tends to split the piece open longitudinally, and is similar in its action to the force which bursts the hoops of a barrel. (2) The longitudinal strain which acts to pull the piece apart in the direction of

its length. Its action is greatest at or near the bottom of the bore, and least at the muzzle, where it is nothing; these two strains increase the volume of the metal to which they are applied. (3) A strain of compression which acts from the axis outward to crush the truncated wedges of which a unit of length of the piece may be supposed to consist; this strain compresses the metal and enlarges the bore. (4) A transverse strain which acts to break transversely by bending outward the staves of which the piece may be supposed to consist. This strain compresses the metal on the inner and extends it on the outer surface. It is known that rupture will take place due to the tangential strain alone, when three times the pressure upon a unit of surface of the bore is greater than twice the tensile strength. Due to the longitudinal strain alone, rupture will take place in the direction of the length, when the pressure is greater than twice the tensile strength; and if the transverse strain alone is considered, rupture will take place when twice the pressure is greater than three times the tensile strength. It therefore appears that the tendency to rupture is greater from the action of the tangential force than from any other, and for lengths above two, or perhaps three calibers, the tangential resistance may be said to act alone, as the aid derived from the transverse resistance will be but trifling for greater lengths of bore; but for lengths of bore less than two calibers, this resistance will be aided by both the transverse and the longitudinal resistance. Every piece should therefore have sufficient thickness of breech to prevent splitting through the latter; after this point has been attained, any additional thickness of breech adds nothing to the strength of the piece. It therefore appears that a fire-arm is strongest at or near the bottom of the bore, and that its strength is diminished rapidly as the length of the bore increases to a certain point (probably not more than three calibers from the bottom); after which, for equal thickness of metal, its strength becomes sensibly uniform. The metals of which cannon are made being crystalline in structure, the size and arrangement of the crystals have an important influence on its strength to resist a particular force; and a metal will have the greatest strength with reference to a particular force when its crystals are small, and the principal faces are parallel to the straining force, if it be one of extension, and perpendicular to it, if it be one of compression. The position of the principal crystalline faces of a cooling solid is found to be perpendicular to the cooling surface; the result of this arrangement of crystals is to create planes of weakness where the different systems of crystals intersect. The effect of this law upon cannons, it has been discovered, is to render radial specimens more tenacious than those cut tangentially from the same gun. The manner and rapidity of cooling have also a great effect upon the ability of

cannon to resist strains, and as all solid bodies contract their size in the operation of cooling, it follows that if the different parts of a cannon cool unequally, it will change its form, provided it be not restrained by the presence of a superior force. If it be so restrained, the contractile force will diminish the adhesion of the parts by an amount which depends on the rate of cooling of the different parts, and the contractibility of the metal. This is an important consideration in estimating the strength and endurance of cannon, particularly those made of cast iron. All such cannon cooled from the exterior (see *ORDNANCE, CONSTRUCTION OF*) are affected by two straining forces; the outer portion of the metal being compressed, and the interior extended, in proportion to their distances from the neutral axis or line composed of particles which are neither extended nor compressed by the cooling process. The effect of this unequal contraction may be so great as to crack the interior metal of cast iron even before it has been subjected to the force of gunpowder. The strain produced by the explosion of gunpowder is not distributed equally over the thickness of metal, but it varies inversely as the square of the distance from the centre; it therefore follows that the sides of a cannon are not rent asunder as by a simple tensile force, but they are torn apart like a piece of cloth, commencing at the surface of the bore. Hence it is that the effect of ordinary cooling is to diminish the strength and hardness of the metal of cannon at or near a point where the greatest strength and hardness are required, i.e., at the surface of the bore. The strains produced by unequal cooling increase with the diameter of the casting and the irregularity of its form. This explains the great difficulty found in making large cast-iron cannon proportionally as strong as small ones, and also how projections like bands, moldings, etc., injure the strength of cannon. It also explains why cannon made of "light" cast iron, or cast iron made more tenacious by partial decarbonization, are not so strong as cannon made of weaker iron; for it is well known that such iron contracts more than the latter in cooling, and therefore produces a greater strain of extension on the surface of the bore. Capt. Rodman of the U. S. Ordnance Department has proposed a plan for cooling cannon from the interior (see *ORDNANCE, CONSTRUCTION OF*), thereby reversing the strains produced by external cooling, and making them contribute to the endurance rather than to the injury of the piece. It is likely, however, that the strains produced by unequal cooling are modified by time, which probably allows the particles to accommodate themselves to a certain extent to their constrained position. In confirmation of this, great endurance has been frequently found in *old* solid cast guns, as in the old 42-pounders tested about the beginning of the war, 1861-65.

Ordnance Department. In the United States, was first established May 14, 1812, and was not provided for in the reduction of the army in 1815, but continued in the service. In 1821 the department was merged into the artillery, attaching to each regiment of artillery 1 supernumerary captain, and giving to each company 4 subaltern officers. The corps of ordnance was re-established April 5, 1832. The department consists of 1 brigadier-general, 8 colonels, 4 lieutenant-colonels, 10 majors, 20 captains, 16 first lieutenants, and 850 enlisted men. It is the duty of the senior officer of the ordnance department to direct the inspection and proving of all pieces of ordnance, shot, shells, small-arms, and equipments procured for the use of the armies of the United States; and to direct the construction of all cannon and carriages, and every implement and apparatus for ordnance, and all ammunition-wagons, traveling-forges, and artificers' wagons; the inspection and proving of powder, and the preparation of all kinds of ammunition and ordnance stores. It is also the duty of the senior officer of the ordnance department to furnish estimates, and, under the direction of the Secretary of War, to make contracts and purchases for procuring the necessary supplies of arms, ordnance, and ordnance stores, etc. In the British service, the ordnance department was a distinct branch of the war department, originally for the supply of all warlike stores used in the naval or military service. The first master of ordnance was created in the time of Henry VIII., and the Tower of London was probably the depot of arms and military stores; Robert, earl of Essex, is said to have been the first master-general, in 1596. It does not appear that the ordnance department of the British service became especially military until the early part of the 18th century, after the organization of the Royal Artillery, in 1743, under the Duke of Montague as master-general. From this time the ordnance department was administered by a master-general and board, the latter being composed of a lieutenant-general of ordnance, surveyor-general, clerk of the ordnance, principal store-keeper, clerk of the deliveries, and treasurer. About 1768 the department became a construction board, with charge of all forts and fortresses, and directed the construction of all the fortifications and military store-houses, and barracks for the ordnance corps. The board was finally abolished as a separate department, the duties carried on by the commander-in-chief, and the various civil branches by separate offices under the secretary of state for war.

Ordnance Office. Before the invention of guns, this office was supplied by officers under the following names: the bowyer, the cross-bowyer, the galeater, or purveyor of helmets, the armorer, and the keeper of the tents. Henry VIII. placed under the management of a master-general, a lieutenant,

surveyor, etc. The master-general was chosen from among the first generals in the service of the sovereign. The appointment was formerly for life; but since the restoration, was held *durante bene placito*, and not unfrequently by a cabinet minister. The letters patent for this office were revoked May 25, 1855, and its duties vested in the minister of war. The last master-general was Lord Fitzroy Somerset, afterwards Lord Raglan.

Ordnance Projectile. See PROJECTILE.

Ordnance Sergeants. In the U. S. service, are staff sergeants who are selected from the sergeants of the line of the army. Their duties consist in receiving and preserving the ordnance, arms, ammunition, and other ordnance stores at posts, under the direction of the commanding officer of the same. They must not be confounded with sergeants of ordnance, who are sergeants in the ordnance detachments at arsenals, etc.

Ordnance Store-keeper. In the British service, is a civil officer in the artillery who has charge of all the stores, for which he is accountable to the office of ordnance.

Ordnance Store-keeper. In the U. S. army, an officer of the ordnance department who holds the rank of captain. The grade has been abolished by act of Congress, and the duties appertaining to the office will be performed by other officers of the ordnance department.

Ordnance Stores. See ORDNANCE.

Oregon. One of the Pacific States of the American Confederacy. Oregon was the name formerly given to the whole territory north of the Rocky Mountains, and was first claimed by the Spanish government, and next by the government of the United States, as far as lat. 54° 40' N. This latter claim was resisted by the British government, which asserted a right to the entire territory, and in 1818 a treaty was made, and renewed in 1827, giving joint occupation to the disputed territory. In 1846 a treaty was concluded, by which the boundary was settled on the 49th parallel. Previous to this latter treaty (1839) emigration from the United States, for the purpose of settlement, commenced, and it continued steadily until the opening of the gold mines in California, which attracted a great many emigrants. In 1849 it formed a Territorial government, and in 1859 it was admitted into the Union as a State. This State has been troubled greatly by Indians, and has been the scene of several wars in earlier days, notably, in 1858, on Rogue River; in 1855, when a general outbreak took place, of which the following is a brief summary: In 1855 a war broke out between the whites and the Indians of Washington Territory. The head and front of the outbreak on the part of the Indians was Kam-al-a-kin. He took this stand from a fixed principle: that of resisting all encroachments on the part of the whites. He had seen the fate of the Indian race in the Willamette Valley, and

he determined to anticipate such a result with regard to his own people, and, if possible, to prevent it. When Gov. Stevens made his arbitrary treaties with him, and left him no discretion but to sell his land; and when the miners began to traverse his country, he concluded that the hour had arrived to fight, and he called to his aid as many of the adjoining tribes as he could persuade into it. The manner in which the treaties on Puget Sound were conducted created great dissatisfaction among the Indians, and they were quite ready to join Kamai-a-kin. The war commenced by the killing of miners, who were picked off in the Yakama country as they were going to Fort Colville, scarcely a month after the council which was held at Walla Walla. The killing of the agent Bolen set the war in a blaze. The small detachment of troops sent to chastise them was driven back. This success on the part of the Klickitats encouraged the Sound Indians, who also took up arms, and in the absence of troops, fell upon and killed the inhabitants of White River; but the wholesale slaughter of women and children by a party under the command of Major Lupton on October 8, 1855, drove the Indians to desperation and caused them to commence the war in earnest; hostilities continued until the summer of 1856. Also, in later years, the Modoc war (1872), the Nez Percés (1877), and the Bannock war (1878).

Oreillere (Fr.). Oreillet, ear-piece of an ancient helmet, shaped like an oyster-shell, for protecting the ear and cheek.

Oreillon (Fr.). Ear of a sword, languet, or small slip of metal on the hilt, which, when the sword is sheathed, extends along the scabbard.

Organization. The act of assigning and putting troops into such uniform state of discipline as may fit them to co-operate on any service. *Organization* may be said to be begun by grouping those combatants who have the same mode of action. These groups are known as "arms of service." An arm of service may be defined to be "a union of combatants having the same mode of action." There are four of these arms in modern armies, viz.: *Infantry, Cavalry, Artillery, and Engineers.* These four arms form the principal part of a mobilized army, and as they or their representatives are always formed into a line of battle to resist the attack of an enemy, or to make an attack, they are generally known as the "line of the army" or "troops of the line," to distinguish them from other bodies of men who form parts of an army. These *arms* are subdivided into fractions for the purpose of instruction and of supply. The unit for instruction and the unit for supply may be the same or different. The unit of supply, as a general rule, is constant, and is also usually the unit of instruction in discipline. The unit of instruction in tactics will depend upon circumstances, and upon the kind of movements the commander desires to make. The common unit

for the four arms, for supplying the men's wants and for instruction in discipline, is the "company." This unit receives, at other times, other names, depending upon circumstances. For instance, a *battery* of artillery is the same as company; the term *squadron* of cavalry frequently means a company, etc.

A *company* consists of a given number of men commanded by a commissioned officer who has the rank of captain. Two, sometimes three, and even more commissioned officers of a grade below that of captain are appointed to assist the captain in the discharge of his duties. These officers have the grade of lieutenant. Their number and the number of men forming a company are fixed by law. A certain number are selected from the men and appointed non-commissioned officers, with the rank of sergeant or of corporal. These non-commissioned officers are used to instruct the men in their military duties and in discipline. The whole company should be divided into *squads* of equal numbers, and each squad placed under the charge of a non-commissioned officer, who should be held responsible for the cleanliness of the men of his squad, not only as to their persons, clothing, and arms, but as to their tents or quarters. The *company*, with its size based on the theory that it must not be larger than one man on foot can thoroughly command in person, is the unit of organization. Two or three or more companies form a *battalion*. Four, and at the outside, five companies placed in line form, in these times, so extended a line that a single person in immediate and personal command of them will find difficulty in making himself heard and understood throughout the entire line. For this reason the battalion should not, as a rule, contain more than four companies.

The *battalion* is the *tactical* unit, both for instruction in tactics and in the execution of its movements. The battalion is sometimes made a unit of administration, and forms a complete organization under the command of a commissioned officer of the grade of major or lieutenant-colonel. The more usual rule is to increase the number of companies so as to have enough to form at least two battalions, and with these companies to form the organization known as a *regiment*.

The *regiment* is always an *administrative* unit, and is commanded by a commissioned officer who has the grade of *colonel*. The colonel is charged with the proper administration of the supplies for the regiment, and with preserving good order and promoting discipline. He takes every opportunity to instruct both the officers and men in the principles and details of all movements that ought in any case to be made by a battalion. Upon the organization of a regiment, the company officers are assigned to companies, and each company is designated by a letter of the alphabet. Upon the recommendation of the captains, the colonel appoints the non-commissioned officers of the companies. He appoints an adjutant from the lieutenants of

the regiment, and a non-commissioned staff from the enlisted men, to assist him in his duties. He selects from the lieutenants a quartermaster, whose appointment is confirmed by the Secretary of War.

The elements of organization for the other three arms of service are practically the same, being that of a company or similar body of men under the command of a captain, and these units grouped together into a battalion or regimental organization for administrative purposes. This subdivision into companies and into regiments is most essential for instruction in discipline.

Discipline is an indispensable condition for the existence of a good army. It imparts *cohesion* and *flexibility* to the armed mass. Without discipline an army is only an armed mob over which a commander would have no control, and upon which he could not rely in the execution of his plans. When the army is to be mobilized the regiments are brought together and organized into *brigades* and *divisions*. Two or more regiments form a brigade; two or more brigades form a division. A general officer of the grade of *brigadier-general* is assigned to the command of a brigade, and one of the grade of *major-general* to the command of a division. These divisions and brigades may be composed entirely of one arm, or they may be composed of troops belonging to all four of the arms.

The *division* is the unit of organization and administration of a mobilized army, and is also the *tactical* unit of the general in command. When the army is very large, three or four divisions are joined together and form an *army corps*. The officer commanding an army corps should be of a higher grade than he who commands a division. This grade in the U. S. army would be that of *lieutenant-general*.

An *army corps* is most generally composed of all arms of service, and is, to all intents and purposes, an army complete in itself. Two or more army corps or armies would be under the command of the *general*, or of a "general-in-chief." There has arisen an organization forming an essential part of every army, known as the *general staff*, and divided into corps and departments to which are assigned special duties. In some cases, the term "general staff" is limited to include only those officers who are used by the general to communicate his orders, and to inform him of the general and particular conditions of the troops; and the term "staff department" or "supply department" is used to include those officers whose duties are confined to distinct branches of service having for their object the supply of troops. If the army is one of very great size, the general ordinarily attaches to his headquarters a representative of the three arms of artillery, cavalry, and engineers, giving them the position of staff-officers with the name of "chief of artillery," "chief of cavalry," etc. They are required to keep the general informed of the state of supplies, and whatever concerns

their particular arm, in a similar manner to that required by the other officers of the staff. The general also appoints from the subordinate officers belonging to his command a certain number of *aides-de-camp*. These officers are *ex officio* adjutants-general, and receive orders from the general himself. They are confidential officers, who are supposed to be used only in delicate and difficult duties, where they may in a degree represent the general. Hence, they are intrusted to deliver verbal orders which cannot be intrusted with propriety to enlisted men or to the ordinary means of communication.

Proportion of Arms of Service.—The mass of a modern army is composed of infantry. The amount of cavalry will depend upon the topographical features of the country, being in some cases as much as one-fourth of the infantry, and in others as little as one-tenth. The amount of light artillery depends upon the character of the country. There should be at least two guns to every thousand men. The quantity of heavy artillery, or number of siege-batteries, which enter the composition of an army, will depend to a great extent upon the plan of campaign and the probable use for which they may be intended. The circumstances of the case in each campaign will therefore decide as to the proportion to be employed. The number of engineer troops will depend both on the nature of the country and on the probable amount of work which will be required from this class of troops. Each division should contain at least one company of engineer troops. It is usual, if there be none, to detail one or more companies of infantry to act as engineer soldiers; they are designated as "pioneers." These engineer troops, or troops acting in that capacity, marching in the advance, make the roads practicable for the command by repairing them, removing obstructions, etc. At the crossing of streams, where bridges are to be made, or where existing bridges are to be repaired to an extent requiring more knowledge of bridge construction than that usually possessed by the pioneer, another detachment of troops belonging to the engineer arm is brought forward to do the work. These troops are known as *pontoniers*, and have special charge of bridge construction for the army. They may be divided into two parts: one to have charge of construction of temporary bridges, especially of floating and trestle bridges, and construction of ferries; the other to have charge of repairs of bridges which have been broken or injured by the enemy, and where quick repair is of importance to an army's movements. These troops charged with bridge construction usually form a part of the reserve, and are only attached to a division under peculiar circumstances. There should be also in the reserve several companies of sappers and miners; their number, like the heavy artillery, being dependent upon the nature of the campaign.

The army, as a machine, is now ready to be used by the general. The next step is to keep it in a condition so that it can be used; in other words, to *preserve* the fighting condition of the army. The discipline and drill have been cared for, and with the organization just sketched out, the general can move the whole mass as a unit in accordance with his will. The army can be kept ready for use only by supplying all the actual and necessary wants of the soldier, and by keeping him in comfort and good health. To do this there must be ammunition, clothing, food, shelter, medicines, surgical attendance, hospital comforts, etc., provided for his use. Also a good system of recruiting must be adopted, by means of which the natural losses due to sickness and death may be made good.

The transportation of the munitions, equipments, provisions, hospital supplies, tents, engineering tools, bridge equipage and boats, baggage, cooking utensils, etc., necessary for the use of an army moving against an enemy, requires the use of large numbers of wagons and a great number of draught animals, which of course should not exceed the absolute necessity of the service. These accompaniments to the army received from the Romans the name of *impedimenta*, for the reason that they hindered the movement of the army. These supply departments form important parts of the composition of a modern army, and the method of executing the duties assigned them constitutes an important branch of the "science and art of war."—Prof. J. B. Wheeler.

Organize. To arrange or constitute in parts, each having a special function, act, office, or relation; as, to organize an army, etc.

Orgue (Fr. *un orgue*). A term used to express that arrangement or disposition of a certain quantity of musket-barrels in a row, which, by means of a priming train of gunpowder, may be subjected to one general explosion. This machine has been found extremely serviceable in the defense of a low flank, a *tenaille*, or to prevent an enemy from crossing the ditch of a fortified place.

Orgues. Are beams of wood hanging perpendicularly over the entrance of a fortified town, which were formerly used as a portcullis, to be dropped in case of any emergency. They are not now used.

Orient. The east or eastern part of the horizon. In surveying, to *orient* a plan signifies to make its situation or bearing with respect to the four cardinal points.

Oriflamme, or Auriflamme. A banner which originally belonged to the abbey of St. Denis, and was borne by the counts of Vexin, patrons of that church, but which, after the country of Vexin fell into the hands of the French crown, became the principal banner of the kingdom. It was charged with a saltire wavy or, with rays issuing from the centre crossways. In later times the oriflamme became the insignia of

the French infantry. The name seems also to have been given to other flags; the oriflamme borne at Agincourt was an oblong red flag split into five parts.

Orihuela. A town of Spain, in Valencia, on the Segura, 81 miles southwest from Alicante. It was a place of some importance in the Moorish invasion, and was held in 718 successfully by Theodoric against Abd-el-Aziz after the battle of the Guadalete. It was conquered in 1285 by Don Jaime of Aragon for his father-in-law, Don Alonso, king of Castile. The city was sacked in 1520 in the civil war at that time raging, and again in the War of the Succession, 1706. It was held for some time in 1837 by the Carlist general Forcadell.

Orillon. This may be described as a projection at the shoulder of a bastion beyond the ordinary flank of a curved portion of rampart and parapet, the curve being convex to the ditch. The orillon, introduced during the 17th century, was generally used in conjunction with a retired flank, made ordinarily with a curve concave to the ditch. Both orillon and retired flank are now obsolete.

Orissa. An extensive province of Hindostan, in the Deccan. A race of Hindoo princes governed the country till 1592, when they were conquered by the viceroy of Akbar. The French, who had taken possession of a part of the country long known as the Northern Circars, attempted to drive the English (who had formed commercial settlements on the coast) out of India. The result of the contest for supremacy in India between the French and English is well known. The Mahrattas, who had seized a portion of Orissa in 1740, were forced to surrender it to the English in 1803. The soldiers of the East India Company were marched into Orissa at the commencement of the present century, and an engagement was subsequently entered into between the Company and the native chiefs and princes, by which the former bound themselves to perform certain services for the country (as maintaining the river-banks in good repair), while the latter engaged to pay a yearly tribute.

Orizaba. A town of Mexico, in the department of Vera Cruz, 60 miles southwest from Vera Cruz. It was occupied by Gen. Prim, in command of the Spanish troops that formed part of the expedition sent by England, France, and Spain to Mexico in March, 1862. A conference was held here shortly after the occupation of the town between the plenipotentiaries of the three powers, when the English and Spanish commissioners determined to withdraw their contingents from Mexico, in accordance with the terms of the treaty of Soledad, while the French on the other hand resolved to push on to the capital, to establish a settled government in the country in lieu of that of Juarez.

Orkney Islands (anc. *Orcades*). A clus-

ter of islands in the North Sea, separated from the north coast of Scotland by the Pentland Firth. From an early period the Norsemen resorted to these islands as a convenient spot from which to make a descent on the Scotch and English coasts. In 878 Harald Haarfager conquered both them and the Hebrides; they were conquered by Magnus III. of Norway in 1499, and were ceded to James III. in 1469.

Orle. In heraldry, one of the charges known under the charge of sub-ordinaries, said to be the diminutive of a bordure, but differing from it in being detached from the sides of the shield. Or an orle gules was the coat borne by John Balliol. An orle of heraldic charges of any kind denotes a certain number (generally eight) of these charges placed in orle, as in the coat of the old Scottish family of Gladstones of that ilk; argent, a savage's head couped, distilling drops of blood proper, thereon a bonnet composed of bay and holly leaves all proper, within an orle of eight martlets sable.

Orléans. An important town of France, capital of the department of Loiret, 75 miles south-southwest from Paris by railway. Orléans, originally called *Genabum*, afterwards *Aureliani* (probably from the emperor Aurelian), was besieged by Attila in 451, but relieved by the Romans, who here defeated Attila. It afterwards passed into the hands of the Franks, was taken by the Northmen in 855, and again in 865. In 1428 it was besieged by the English under the Duke of Bedford, but was delivered from the besiegers by the inspiring exertions of Joan of Arc, who on this account is also named the Maid of Orléans. In the civil wars of the 16th century it was besieged in 1563 by the Duke of Guise, who was assassinated before the walls. During the Franco-Prussian war, 1870-71, Orléans was occupied by the Germans, September 27, and evacuated November 10, 1870.

Ormskirk. A town of England, county of Lancaster, 12 miles north by east from Liverpool. Near this place, in 1644, the royalists were defeated by the Parliamentary troops with great slaughter.

Ormus, or Ormuz. A small island in the strait of the same name, at the entrance of the Persian Gulf, and within 10 miles of the Persian coast. It is about 12 miles in circumference, and belongs to the sultan of Muscat. It was occupied by the Portuguese in the 16th century. The town was demolished in 1622 by Shah Abbas, assisted by the English, and its trade was removed to Gombroon.

Ornamental Fireworks. See **PYROTECHNY.**

Ornaments, Military. Are those parts of the dress of a soldier which are more for appearance or distinction than for absolute use, as plates for belts, trimmings, etc.

Ornese. An ancient town in Argolis, near the frontiers of the territory of Philius, and 120 stadia from Argus. It was

originally independent of Argos, but was subdued by the Argives in the Peloponnesian war, 415 B.C.

Orteil. See **BERME.**

Ortelsburg. A town of East Prussia, in the government of Königsberg, 80 miles southeast of Königsberg. Several engagements took place here between the French and Russians in 1807.

Orthez, or Orthes. A town of France, in the department of the Lower Pyrenees, situated on the Gave de Pau, 25 miles northwest from Pau. It suffered much during the civil wars in France after the Revolution. Near this town the British and Spanish armies commanded by Wellington defeated the French under Soult, February 27, 1814.

Ortona. An ancient city of Latium, situated on the confines of the Æquian territory. It is twice mentioned during the wars of the Romans with the latter people: first in 481 B.C., when it was besieged and taken by the Æquians; and again in 457 B.C., when the Æquians by a sudden attack took Corbio, and after putting to the sword the Roman garrison there, made themselves masters of Ortona also; but the consul Horatius engaged and defeated them at Mount Algidus, and after driving them from that position, recovered possession both of Corbio and Ortona. No mention of it is found in later times, and it probably ceased to exist.

Orvieto. Called in the time of the Longobards *Urbs Vetus*, of which its present name is a corruption, a city of Italy, province of Perugia; is of Etruscan origin, but of its early history nothing is known. It has been a place of residence and retreat in turbulent times of upwards of thirty popes.

Osage Indians. A tribe of aborigines of Dakota stock who are located, to the number of about 2500, on a reservation in Indian Territory. They are divided into eight bands,—the Beavers, Big Chiefs, Big Hills, Black Dogs, Clammores, Half-Breeds, Little Osages, and White Hairs, and have made but little progress in civilization.

Oschatz. A town of Saxony, circle of Leipsic, 81 miles east-southeast from Leipsic. It was here that the treaty of peace was concluded between Frederick the Great and the empress Maria Theresa which put an end to the Seven Years' War, in 1763.

Osci, or Opici. One of the most ancient tribes of Italy; they inhabited the centre of the peninsula, from which they had driven out the Siculi. Their principal settlement was in Campania, but we also find them in parts of Latium and Samnium. They were subdued by the Sabines and Tyrhenians, and disappeared from history at a comparatively early period. They were called in their own language *Uskus*.

Osnabruck, or Osnaburg. A town in Hanover, 71 miles from Hanover. Here was concluded the peace of Westphalia in 1648.

Ossun. A town of France, in the department of the Upper Pyrenees, 7 miles southwest from Tarbes. A great battle was fought with the Saracens, in the 8th century, in its neighborhood.

Ostend. A fortified seaport town of Belgium, province of West Flanders, situated on the coast of the North Sea, 67 miles northwest from Brussels. During the war of the Dutch against Spain, Ostend sustained a memorable siege for more than three years (1601-4). So tremendous was the bombardment that the noise of the Spanish artillery is said to have been occasionally heard at London. At last, after a loss of 50,000 men on the part of the garrison, and 80,000 on that of the Spaniards, the town surrendered on honorable terms, and the Spanish general Spinola was put in possession of Ostend, now reduced to heaps of ruin. On the death of Charles II. of Spain, the French seized Ostend; but in 1706, after the battle of Ramillies, it was retaken by the allies. It was again taken by the French in 1745, but restored in 1748. In 1756 the French garrisoned this town for the empress queen Maria Theresa. In 1792 the French once more took Ostend, which they evacuated in 1793, but regained in 1794. The English destroyed the works of the Bruges Canal; but the wind shifting before they could re-embark, they surrendered to the French, May 19, 1798.

Ostrolenka. A town of Poland, on the Narew. Near here the French repulsed the Russians under Essen, February 16, 1807, and an indecisive and bloody engagement took place between the Poles under Skrzynecki and the Russians under Diebitsch, May 26, 1831.

Ostrovno. A village of Russia, in the government of Mohilev, 90 miles northwest from Mohilev. The Russians were defeated here in 1812 by the French.

Oswego, Fort. See FORT ONTARIO.

Oswestry. A town of England, in Shropshire, 15 miles northwest from Shrewsbury. Oswestry is said to derive its name (originally *Oswaldstree*) from Oswald, the king of Northumbria, who was slain here in the early part of the 7th century, in a battle fought with the ferocious Penda, king of Mercia.

Otaheite, or Tahiti. The largest of a cluster of islands in the South Pacific Ocean, that were frequently visited by Capt. Cook, and named by him the Society Islands. In 1799, King Pomare ceded the district of Matavai to some English missionaries. Queen Pomare was compelled to put herself under the protection of France, September 7, 1848. She retracted, and Otaheite and the neighboring islands were taken possession of by Admiral Dupetit-Thuars in the name of the French king, November, 1848. The French imprisoned Mr. Prichard, the English consul, March 5, 1844, but the act was censured in France.

Otchakow. A small town and seaport of

South Russia, in the government of Khereson, 40 miles east-northeast from Odessa. During the Russian wars with Turkey in the 18th century, Otchakow was alternately the property of each, until it was taken by Potemkin in 1788, and definitively annexed to the Russian dominions.

Otoes. A tribe of Indians of Dakota stock who reside with the Missourians on a reservation in Nebraska. They are generally peaceful and industrious, and number with their kindred tribe about 450.

Otomis, or Othomis. An ancient tribe of Indians who are said to have inhabited the Valley of Mexico before the Aztecs. They are now scattered through different parts of the country, and having lost all tribal distinctions are become amalgamated with other Mexican races.

Otricoli. A town of Italy, 37 miles north of Rome. The Neapolitans were defeated by the French in its neighborhood in 1798.

Ottawas. A tribe of Algonkin Indians, who formerly resided on the shores of Lake Erie. They subsequently moved to Kansas, and in 1870 settled in Indian Territory, where they now prosper. They are well advanced in civilization. A number of this tribe settled in Canada, where their descendants may yet be found; some are also settled on Lake Michigan with the Chippewas.

Otterburn (or Chevy Chase), Battle of. Was fought in August, 1888; a fight which Froissart declares to have been the bravest and most chivalrous which was fought in his day. According to the ballad (named Chevy Chase) Percy vowed that he would enter Scotland and take his pleasure for three days in the woods of his rival, and slay the deer therein at will. Douglas, when he heard the vaunt, exclaimed, "Tell him he will find one day more than enough." Accordingly, at the time of the hay harvest, Percy, with stag-hounds and archers, passed into the domains of his foe, and slew a "hundred fallow deer and harts of grace." When the English had hastily cooked their game and were about to retire, Earl Douglas, clad in armor and heading his Scottish spears, came on the scene. Haughty challenge and defiance passed between the potentates, and the battle joined. In the centre of the fray the two leaders met. "Yield thee, Percy!" cried Douglas. "I will yield to no Scot that was ever born of a woman!" cried Percy. During this colloquy, an English arrow struck Douglas to the heart. "Fight on, my merry men!" cried he, as he died. Percy, with all the chivalrous feeling of his race, took the dead man by the hand, and vowed that he would have given all his lands to save him, for a braver knight never fell by such a chance. Sir Hugh Montgomery having seen the fall of Douglas, clapped spurs to his horse, dashed on Percy, and struck his spear through his body, a long cloth-yard and more. Although the leaders on both sides had fallen, the battle, which had begun at break of day, continued till

the ringing of the curfew-bell. Sootsmen and Englishmen claim the victory. When the battle ended, representatives of every noble family on either side of the border lay on the bloody greensward.

Oude, or Oudh. A province of British India, separated on the north from Nepaul by the lower ranges of the Himalaya, whence it gradually slopes to the Ganges, which forms its boundary on the south and south-west. The people of this province are of a decidedly warlike disposition; they mainly supply the famous (or infamous) Sepoys of the Bengal army. Oude is believed by Sanscrit scholars to be the ancient Kosala, the oldest seat of civilization in India. The country was conquered by a Mohammedan army in 1195, and made a province of the Mogul empire. In 1763 the vizier of Oude, Saifdar Jung, rebelled against his imperial master, Ahmed Shah, and forced the latter to make the governorship hereditary in his family. When the mutiny of 1857 broke out, Oude became one of the great centres of rebellion. The country was subdued by the British.

Oudenarde (Fr. *Audenarde*). A town of Belgium, in East Flanders, 14 miles south-west from Ghent. The town was taken by the French, aided by an English force, in 1658; it was again besieged in 1674 by the stadtholder William (III. of England) of Orange; and in 1706 it was taken by Marlborough. An attempt made by the French to retake it brought on the famous battle of Oudenarde, one of Marlborough's most celebrated victories, which was gained on July 11, 1708, with the aid of Prince Eugène, over a French army under the Duke of Burgundy and Marshal Villars. After this battle the French king made offers of peace, which were not accepted.

Oulart (Southeast Ireland). Here 5000 Irish insurgents attacked the king's troops in small number, May 27, 1798. The North Cork militia, after great feats of bravery, were cut to pieces, 5 men only escaping.

Ourique. A town of Portugal, province of Alemtijo, 80 miles southwest of Beja. Here Alfonso, count or duke of Portugal, is said to have encountered and signally defeated five Saracen kings and a prodigious army of Moors, July 25, 1139, and to have been hailed king on the spot. Lisbon, the capital, was taken, and he soon after was here crowned as the first king, the Moorish dominion being overthrown.

Outbar. To shut out by fortification.

Outbrave. To excel in bravery or boldness; to defy.

Outfit. In the British service, is the necessaries, uniform, etc., which an officer provides when he is gazetted to a regiment, or as proceeding to India. No allowance is made for an outfit, excepting in case of officers first promoted from the ranks, when £100 is granted to infantry and £150 to cavalry officers.

Outflank. To go beyond on the flank or

side; to get the better of, as by extending one's lines beyond or around that of one's enemy.

Outgeneral. To exceed in generalship; to gain advantage over by superior military skill.

Outguard. A guard at a distance from the main body of an army; or a guard at the farthest distance; hence, anything for defense placed at a distance from the thing to be defended.

Outline, or Tracing. Is the succession of lines that show the figure of the works, and indicate the direction in which the defensive masses are laid out, in order to obtain a proper defense.

Outlyers. In the British service, formerly this term applied to men who were permitted to work, on condition that the whole of their pay was left in the hands of their captain for the time they were so employed. This sum the officer appropriated to his own use, to enable him to increase his pay and to keep a handsome table when he mounted guard. It was also a common practice to place on the muster-rolls the names of officers' children, and instances have occurred of girls receiving men's pay as outlyers.

Outlying. Lying or being at a distance from the main body; as, outlying pickets. Also, being on the exterior or frontier.

Outmanœuvre. To surpass in manœuvreing.

Outmarch. To march faster than; to march so as to leave behind; as, the horse outmarched the foot.

Outnumber. To exceed in number; as, the French were outnumbered.

Outpart. At a distance from the main body.

Out-pensioner. A pensioner attached to a hospital, as Greenwich or Chelsea, England, who has liberty to live where he pleases.

Outpost. A post or station without the limits of a camp, or at a distance from the main body of an army. The troops placed at such a station.

Outposts. The term, *outposts*, is used at the present time to designate the particular detachments of troops and the method of arranging them, by means of which an army when in bivouac, in camp, or in cantonment, is protected from surprise by an enemy.

Outrank. To take the precedence of, or be superior to, in rank; to rank.

Out-sentry. A sentry who guards the entrance or approach to a place; an out-guard.

Outside. In fencing, that part which is to the right of the line of defense.

Outside Guard. A guard used with the broadsword and sabre, to defend the outside of the position.

Outwall. The exterior wall of a building or fortress.

Outward Face. A word of command for troops to face to the right and left from their centre.

Outwing, To. To extend the flanks of an army or line in action, so as to gain an advantageous position against the right or left wing of an enemy.

Outworks. In fortification, are minor defenses constructed beyond the main body of a work, for the purpose of keeping the enemy at a distance, or commanding certain salient points which it is undesirable that he should occupy. Such works are ravelins, lunettes, hornworks, crown-works, demilunes, tenailles, etc. They occur in certain necessary order, as a ravelin before the curtain and tenaille, a hornwork before a ravelin, and so on.

Ovation. See TRIUMPH.

Ovens. Are always provided in garri-sons, so that the troops may bake their own bread. A large saving of flour is thus made, which is the most considerable element of the post fund. A brick oven large enough to bake 600 rations can be constructed in less than twenty-four hours. The cylindrical form is greatly to be preferred, as it is more easily made and requires less material than the ordinary forms. The want of brick for the arch and fireplace of ovens may be supplied in the field by two gabions of semicircular or semi-elliptical form. They are placed one above the other on the flat side, and form a cradle. The interior and exterior is plastered with clay, which must penetrate the interstices of the basket-work. The front and back parts are shut in the same manner, or with sods. The cradle is then covered with earth to retain the heat; and in order that the superincumbent weight may not cause it to give way, withes are attached to the top of the basket-work, passed vertically through the embankment, and then fastened to the longitudinal beam of a wooden horse straddled against the exterior curve. Ovens may also be made of wood or earth. To construct rapidly an earthen oven, dig a slope with a step, and on its prolongation dig the length of the oven in a trench separated from the step by a mass of earth, to be pierced later as the mouth of the oven. Then dig laterally portions of an elliptical arch so as to make the arch a given breadth. This work finished, pierce the mouth, and cover the trench with from three to five sods as arch stones, leaving a chimney-place at the bottom. Ovens for from 100 to 250 rations may be thus made. In some European armies they have very convenient portable ovens.

Over. Above in place, position, or authority; as, he was placed in command over Lord Monkton.

Overcharge. An excessive charge, as of a gun.

Overcharge. To fill with too much powder and ball, as a gun.

Overcharged Mine. A mine whose crater is wider at top than it is deep.

Overlap. Is to overspread any preceding object. In marching by echelon for the

purpose of forming upon any given point, but particularly in wheeling from column into line, troops may lose their relative distances by not taking ground enough; when this occurs, the rear division, company, or section, unavoidably crowds upon its preceding one, and is then said to overlap.

Overmarch. To fatigue or wear out by too much marching.

Overmatch. To be too powerful for; to conquer; to subdue; to suppress by superior force. Also, one superior in power; one able to overcome.

Overpower. To vanquish by force; to subdue; to defeat.

Overrun. In a military sense, to ravage, to lay waste. A country which is harassed by incursions is said to be overrun.

Overseer. An officer in the ordnance department, who superintends the artificers in the construction of works, etc. He is also called a superintendent.

Overshoot. To shoot beyond the mark.

Overslaugh. To hinder or stop; as, by an overslaugh or unexpected impediment; as, to overslaugh a military officer, that is, to hinder or stop his promotion or employment by the appointment of another to his rank or duties.

Overthrow. Total defeat; discomfiture; rout.

Overturn. To overthrow; to conquer.

Oviedo. A town of Spain, capital of the province of the same name, 55 miles north-northwest of Leon. This city was twice plundered of its ecclesiastical and other treasures during the war of independence, first by Soult, and subsequently by Bonnet.

Own, King's or Queen's. A term which has been attached to some British regiments since the revolution in 1688. Thus the 4th Foot, which landed with William III., was called the 4th King's Own.

Owyhee, or Hawaii. An island in the North Pacific Ocean, the most eastern, and by far the largest of the Sandwich Islands. It was on this island that the celebrated Capt. Cook fell a sacrifice to a misunderstanding, or sudden impulse of revenge on the part of the natives, on Sunday, February 14, 1779.

Ox. See BULLOCK.

Oxford. An ancient and famous city in England, the chief town of the county of Oxford, 55 miles west-northwest from London. The townsmen closed their gates against William the Conqueror, who stormed the town in 1067, and gave it to one of his followers, Robert d'Oyley, who built a castle here to overawe the disaffected Saxons. The paction that terminated the strife between Stephen and Henry II. was drawn up at Oxford. During the great civil war of the 17th century, it was for a while the headquarters of the royalist forces, and was conspicuous for its adherence to the cause of Charles I.

Oxford Blues. See HORSE GUARDS, ROYAL.

P.

Pace (Lat. *passus*). In its modern acceptance, is the distance, when the legs are extended in walking, between the heel of one foot and that of the other. Among disciplined men the pace becomes one of constant length, and as such is of the utmost value in determining military movements, the relative distances of corps and men being fixed by the number of paces marched, and so on. The pace varies in different countries; in the United States it is 28 inches direct step, and 33 double step; in Great Britain 30 inches direct step, and 33 double step. With the Romans the pace had a different signification; the single extension of the legs was not with them a pace (*passus*), but a step (*gradus*); their pace being the interval between the mark of a heel and the next mark of the same heel, or a double step. This pace was equivalent to 4.84 English feet.

Pack and Draught Animals. All animals which are used as beasts of burden and of draught, and all artillery horses are considered under this head. Taking the usual effect of a man's daily labor as unity, a horse can carry a load on a horizontal plane 4.8 to 6.1 times, and a mule, 7.6 times greater than a man. Taking a man with a wheelbarrow as unity, a horse in a four-wheel wagon can draw 17.5, and in a cart, 24.8, and a mule in a cart, 28.3 times greater burden. On account of the peculiar build of a mule he is a superior pack-animal to the horse. There are from 91 to 180 draught horses required for a field-battery; for siege-train about 1900 (see **SIEGE-TRAIN**); and 8 for a siege-gun. The load allotted to a light artillery horse is 700 pounds; to a heavy field artillery horse, 800 pounds; and to a siege artillery horse, 1000 pounds, including weight of carriages. It is less than that drawn by a horse of commerce, in consequence of bad roads, bad forage, rapid movements, and forced marches. A team of four horses can draw, with useful effect, including the weight of carriage, 2400 pounds; six horses, 3000 pounds; eight horses, 3600 pounds; and twelve horses, 4800 pounds. It is usual to estimate the weight of a carriage exceeding 1200 pounds as part of the load. A pack-horse can carry 250 to 300 pounds 20 miles a day; and a draught horse, 1600 pounds 23 miles a day, weight of carriage included. Usually a horse can draw seven times as much as he can carry. An ordinary march is about 15 miles at $2\frac{1}{2}$ miles per hour for six hours; this must depend upon the condition of the horses, state of the roads, and various other circumstances.

Horses starting fresh, and resting after their work, may, on tolerable roads, perform 2 miles in half an hour; 4 miles in one and a half hours; 8 in four, and 16 in ten hours. The daily allowance of water for a horse is four gallons. For the daily ration of forage supplied to animals in the U. S. service, see **FORAGE**. An army requires to be accompanied by several thousand pack-animals, sometimes horses, but preferably mules; and in Asia, commonly camels, or even elephants. In battle, the immediate reserves of small-arm ammunition are borne in the rear of divisions by pack-animals; the heavy reserves being in wagons between the army and its base of operations.

Buffalo.—An animal of the ox tribe, very important and useful to man. It is a native of the East Indies, where it has long been domesticated, and from which it was carried to Egypt and the south of Europe. It was introduced into Italy about the close of the 6th century A.D., is now very generally used as a beast of draught and of burden in that country, as it is also in India; it is also used in the latter country by the military as a beast of burden.

Bullock.—This beast is admirable for slow draught, especially over rough roads, or through forests, or other places where there are no roads at all. Bullocks stand fire better than any other animals, and used to be employed in India for draught in field-batteries. They must not be hurried; their ordinary pace is from 2 to $2\frac{1}{2}$ miles an hour. If used over hard roads, they require shoeing. They want but little care, and thrive well on poor food. They attain their prime at six years, age to be known by annular swelling on horns, allowing three years for first ring, and one for each of the others. They are used in many parts of India as pack-animals, when they carry a load of 200 pounds.

Camels.—These animals are used in East India from three to sixteen years of age; about 7 feet high (to top of hump), about 8 feet long from nose to tail; pace about 2 miles an hour, kept up steadily for the longest marches; load for work on service about 400 to 450 pounds. They thrive well upon leaves of trees, and can go without water longer than any other animal. During temporary halts the laden camel can kneel down and rest. They are admirably adapted for carrying long articles, such as scaling-ladders, pontons, etc. The camel is at home in the desert and works well in the plains of India; it is unsuited for hilly countries.

After rain in clay soil, and over rocks and stony places, they split up and are consequently useless there. They are good for fording rivers that are deep but not rapid, and where the bottom of the river is shifting sand, the passage of a number of camels over it renders it hard and firm. The average weight of the camel is about 1170 pounds.

Elephant.—A gigantic animal of the order *Proboscidea*, is the largest and heaviest of existing quadrupeds, and is celebrated for sagacity and docility. The ancient Carthaginians and other nations employed elephants in war, not only as beasts of burden but as combatants. These animals formed part of the army which Hannibal led across the Alps, and they are said to have decided the victory at the battle of Trebia. For a long period the elephant was as important an arm of war as the artillery of modern nations. Seleucus is said to have had more than 100 elephants at the battle of Ipsus. The elephant is the king of beasts of burden, becoming fit for work at twenty years of age, and lasting well to fifty and even sixty years of age. The load for steady work varies from 1680 to 2240 pounds exclusive of the pad; pace from 8 to 8½ miles an hour; when laden can keep up well with infantry in their daily marches; full grown his height is from 10 feet to 11 feet; is most tractable in disposition, is invaluable during marches in countries flooded by rain for extricating carts, guns, and wagons that have stuck in the mud. They are now used in India for the draught of guns in siege-trains; before such guns are taken under fire it is necessary to have the elephants taken out and replaced by bullocks, as the former cannot be made to stand fire. The average weight of an elephant in India is about 6600 pounds. They are often used in hilly countries to carry mountain guns on their back.

Lama, or Llama.—Is a most useful South American quadruped of the family *Camelidae*. It was in general use as a beast of burden on the Peruvian Andes at the time of the Spanish conquest, and was the only beast of burden used by the natives of America before the horse and ass were introduced by Europeans. From the peculiar formation of its feet it can walk securely on slopes too rough and steep for any other animal. The burden carried by the lama should not exceed 125 pounds, and its rate of traveling is about 12 to 15 miles per day.

Mule.—This is an excellent draught animal and almost rivals the horse for general military purposes. Their common load, including weight of pack-saddle, is from 200 to 250 pounds; height varies from 18 to 16 hands. They will eat almost anything, and require less careful management than the horse; the mule from the male ass and the mare is the best; their voices take after the sire. The real value of the mule is felt most strongly in mountainous countries.

Packer. A man whose duty it is to place and adjust the loads of pack-animals and to

take charge of them upon the march. As packing requires long training and experience, packers are usually hired when needed.

Packing. Is the act of making up and adjusting the load of a pack-animal. It may be considered one of the arts.

Pack-mule. Mule used for carrying a pack.

Pack-saddles (*Sp. aparejos*). Are variously fitted, according to the objects to be carried; some for provisions or ammunition; others for carrying wounded men, tents, and, in mountain warfare, even small cannon. The one in general use in the U. S. army (called *aparejo*) is 4 feet 9 inches long by 2 feet wide.

To "set up" an *aparejo*.—Prepare straight, smooth sticks, from ¾ to 1 inch in diameter (wild-rose stems are the best, but any tough elastic wood will answer), and the coarsest grass that can be obtained. The grass should be cut green, free from flower-stalks, and dried slowly in the shade. Place the *aparejo* upside-down; take four sticks 1 inch in diameter, cut them to fit tightly, two in the width and two in the length; place one in each end, and one in each side of the compartment. Then place sticks ¾ to ¾ of an inch in diameter, cut to fit tightly, lengthwise of the compartment at intervals of 2 inches. Shake the grass thoroughly, and place layer after layer on the sticks without displacing them, until the compartment is as full as it can be stuffed with the hand. Great care is necessary to insure an equal distribution of the grass in the compartment. The corners are stuffed as hard as possible, a sharp stick being used for the purpose. When the *aparejo* is stuffed, it should be put on the mule for which it is intended, and the crupper adjusted.

An *aparejo cincha* is canvas, 72 inches long and 20 wide, folded so as to bring the edges in the centre of the cincha. A semicircle of strong leather pierced with two holes is stitched on one end, and two loops of strong leather on the other.

The *latigo strap* is strong bridle leather, 72 inches long, 1½ inches wide at one end and tapering to ¾ inch at the other. The wide end has holes punched in it. The *aparejo cincha* and *latigo strap* are used to tighten the *aparejo*.

Under the *aparejo* is placed a saddle-blanket, and a corona, or upper saddle-blanket; the latter is made by stitching two or three folds of old blanket or other woollen cloth together. It is the same size as the saddle-blanket and used over it.

The *hammer-cloth* is made of matting or canvas, of a size to exactly cover the *aparejo*. Two pieces of hard wood 20 inches long, 2 inches wide, 1½ inches thick, flat on one side, round on the other, and beveled to an edge at the ends, are placed 6 inches from the ends of the cloth. They have leather caps stitched over their ends. The hammer-cloth is used over the *aparejo* and under the *aparejo cincha*.

The *sling-rope* is of half-inch rope, 16 feet long.

The *lash-rope* is of one and a fourth inch hemp rope, 32 to 36 feet long; one end spliced to the cincha ring, the other end served.

The *cincha* is strong canvas, 33 inches long by 11 inches wide; two rectangular pieces of strong leather 8 inches long by 5½ inches wide are stitched on one end, one on either side; in one of these pieces of leather there is a slit through which a hard-wood hook is passed and firmly fastened with a leather thong. There is a ring 8 inches in diameter securely stitched in the other end of the cincha.

There is also a pack-cover made of canvas, 5 feet square; and a blind made of leather, with strings and loop of the same material. The *aparejo* when securely placed on the pack-animal is a very serviceable pack-saddle, and cannot readily be displaced.

Pack-train. A number of loaded pack-animals with their drivers. Pack-trains are employed in mountainous countries or regions impassable for vehicles to carry supplies for armies. The mule is more generally serviceable in this work than the horse.

Padua (anc. *Patavium*, It. *Padova*). A town of Italy, capital of the province of the same name. It is surrounded by walls and ditches, and is fortified by bastions. *Patavium* was founded by the Trojan chief Antenor, and according to Strabo, it could send an army of 120,000 men into the field. The *Patavians* were constantly at war with, and successfully withstood, the *Cisalpine Gauls*; and in 301 B.C. they also defeated Cleonymus the Lacedæmonian, who had unexpectedly landed at the mouth of the *Medoacus* (the modern Brenta), and attacked them. *Patavium* fell eventually under the power of Rome, though it seems to have retained a semblance of independence. In 452 its prosperity came suddenly to an end, when it was taken and destroyed by Attila; and in 601 it was again taken and burnt to the ground by Agilulf, king of the Longobards. It rose, however, from its ashes, and in the 10th century it had already become, as it has continued, one of the most important cities of Upper Italy. In 1164 Padua formed, with Verona, Vicenza, and Treviso, a league for the protection of their liberties against Frederick I. (Barbarossa); in 1167 it joined the great Lombard League; and by the peace of Constance in 1183 had at length its liberties acknowledged. In 1289, Ezzelino da Romano made himself master of it, and after having practiced unheard-of cruelties, in 1256 he was driven out and defeated by a crusade formed against him by most of the towns in Upper Italy. After a period of stormy independence, Padua in 1387 fell under the sway of the house of Carrara, who held it till the year 1406, when it was taken by the republic of Venice, with which, in 1797, it passed into the hands of Austria, by the treaty of Campo Formio. In 1866 it was

ceded to Napoleon III., and by him transferred to the kingdom of Italy.

Pæones. A powerful Thracian people, who in early times were spread over a great part of Macedonia and Thrace. Their country was called *Pæonia*. The *Pæonian* tribes on the lower course of the Strymon were subdued by the Persians, 518 B.C.; but the tribes in the north of the country maintained their independence. They frequently invaded and plundered the territories of the Macedonian monarchs; but they were eventually subdued by Philip, the father of Alexander the Great. After the conquest of Macedonia by the Romans, 168, the part of *Pæonia* east of the *Axius* formed the second, and the part of *Pæonia* west of the *Axius* formed the third of the four districts into which Macedonia was divided by the Romans.

Pæstum (anc. *Posidonia*, It. *Pesto*). Anciently a Greek city of Lucania, in the present Neapolitan province of Principato Citereiore, on the *Sinus Pæstanus*, now the Gulf of Salerno. It was founded by the Træzenians and the Sybarites some time between 650 and 610 B.C. It was subdued by the Samnites of Lucania, who named it *Pæstum*, and slowly declined in prosperity after it fell into the hands of the Romans, who established a colony here about 278 B.C. In 210 B.C. it furnished ships to the squadron with which D. Quintus repaired to the siege of Tarentum; and in the following year it was among the eighteen colonies which still professed readiness to furnish supplies to the Roman armies. In the 10th century it was burnt by the Saracens, and the site is now occupied by the modern village of Pesto.

Pageant. In ancient military history, a triumphal car, chariot, or arch, variously adorned with colors, flags, etc., carried about in public shows, processions, etc. Also gorgeous show or spectacle.

Pagrus (now *Pagras*, *Bagras*, *Bargas*). A city of Syria, on the eastern side of Mount Amanus, at the foot of the pass called by Ptolemy the Syrian Gates, on the road from Antioch to Alexandria, the scene of the battle between Alexander Balas and Demetrius Nicator, 145 B.C.

Pah. The name of the stockaded intrenchments of the New Zealanders.

Pah-Ute Indians. A tribe of aborigines of Shoshone stock, who, to the number of 2000, reside on two reservations in Nevada. (See INDIANS AND THEIR AGENCIES.) They are a peaceable race, but are low down in the scale of civilization.

Pailler (Fr.). An ancient body of French militia. The soldiers belonging to it were probably so called either from the circumstance of their wearing straw in their helmets, in order to know one another in action, or because they were accustomed to set fire to the habitations of their enemies with bundles of straw, which they always carried with them for that purpose.

Paladin (Fr.). A name given to those

ancient knights who were either what the French call *comtes du palais*, "counts of the palace," or princes lineally descended from Charlemagne and other old kings.

Paladin. A term originally derived from the counts Palatine, or of the palace, who were the highest dignitaries in the Byzantine court, and thence used generally for a lord or chieftain, and by the Italian romantic poets for a knight-errant.

Palæsta (now *Palasa*). A town of Epirus, on the coast of Chaonia, and a little south of the Acroceraunian Mountains. Here Cæsar landed his forces when he crossed over to Greece to carry on the war against Pompey.

Palæstra. In Grecian antiquity, a public building where the youth exercised themselves in the military art, wrestling, running, etc.

Palais Royal. A heterogeneous mass of buildings on the eastern side of the Rue Richelieu, in Paris, composed of a palace, theatres, public gardens, shops, cafés, etc. The old palace was built between 1624 and 1686 on the site of the Hôtel Rambouillet by Cardinal Richelieu, who, at his death, bequeathed it to Louis XIII. It was taken possession of by the republican government, and used for the sittings of the tribunes during the Reign of Terror. The palace was sacked by the mob during the revolution of 1848.

Palanka. A species of permanent intrenched camp attached to Turkish frontier fortresses, in which the ramparts are revetted with large beams, rising 7 or 8 feet above the earthwork, so as to form a strong palisade above.

Palanquin (Hind. *palki*). A vehicle commonly used in Hindostan, China, Japan, and other Asiatic countries by travelers. The palanquin in use in Hindostan is a wooden box, about 8 feet long, 4 feet wide, and 4 feet high, with wooden shutters, which can be opened or shut at pleasure, and constructed like Venetian blinds for the purpose of admitting fresh air, while, at the same time, they exclude the scorching rays of the sun and the heavy showers of rain so common in that country. At each end of the palanquin, on the outside, two iron rings are fixed, and the *hammals*, or palanquin-bearers, of whom there are four, two at each end, support the palanquin by a pole passing through these rings. Traveling in this mode is continued both by day and night, and the palanquin is accompanied by a train of attendants, who carry the traveler's clothes and whatever articles he may not immediately need. Similar modes of traveling have been at various times in use in Western Europe, but only for short distances. The Roman *lectica* ("litter"), the French *chaise à porteurs*, and the English sedan-chair were the forms of vehicles most in use, and the two latter were in general use in towns till they were superseded by coaches, etc. The Roman litter was one of the criteria of its

owner's wealth, the rich man generally exhibiting the prosperous condition of his affairs by the multitude of the bearers and other attendants accompanying him.

Palatinate, The (Ger. *Pfalz*). A name applied to two German states, which were united previously to the year 1620. They were distinguished as the Upper and Lower Palatinate. The Upper now forms a part of the kingdom of Bavaria, and the Lower a part of Rhenish Prussia, situated on both sides of the Rhine, between Worms and Carlsruhe. By the peace of Lunéville (1801), the Duke Maximilian of Zweibrücken was compelled to cede a portion of the Rhenish Palatinate to France, a part to Baden, a part to Hesse-Darmstadt, and a part to Nassau. Treaties of Paris of 1814 and 1815 re-assigned the Palatinate lands beyond the Rhine to Germany, Bavaria receiving the largest share, and the remainder being divided between Hesse-Darmstadt and Prussia.

Palatine. A town of Montgomery Co., N. Y., on the north side of the Mohawk River. Near here, at Stone Arabia, an engagement took place October 18, 1780, between the Tories under Johnson and the Continental militia under Col. John Brown, in which the latter were defeated and their leader slain.

Pale. In heraldry, one of the figures known as ordinaries, consisting of a horizontal band in the middle of the shield, of which it is said to occupy one-third. Several charges of any kind are said to be "in pale" when they stand over each other horizontally, as do the three lions of England. A shield divided through the middle by a horizontal line is said to be "parted per pale." The pallet is the diminutive of the pale, and is most generally not borne singly. Three pallets gules were the arms of Raymond, count of Provence. When the field is divided into an even number of parts by perpendicular lines, it is called "paly of" so many pieces. When divided by lines perpendicular and bendways crossing, it is called "paly bendy." An endorse is a further diminutive of the pallet, and a pale placed between two endorses is said to be endorsed.

Pale. In Irish history, means that portion of the kingdom over which the English rule and English law were acknowledged. There is so much vagueness in the meaning of the term, that a few words of explanation appear necessary. The vagueness arises from the great fluctuations which the English authority underwent in Ireland at various periods, and from the consequent fluctuation of the actual territorial limits of the Pale. The designation dates from the reign of John, who distributed the portion of Ireland then nominally subject to England into twelve counties palatine, Dublin, Meath, Kildare, Louth, Carlow, Kilkenny, Wexford, Waterford, Cork, Kerry, Tipperary, and Limerick. To this entire district, in a general way, was afterwards given the designation

of the Pale. But as it may be said that the term is commonly applied by the writers of each age to the actual English territory of the period, and as this varied much, care must be taken to allude to the age of which the name Pale is used. Thus at the close of the reign of Edward III., the English law extended only to the four counties of Dublin, Carlow, Meath, and Louth. In the reign of Henry VI., the limits were still further restricted. In a general way, however, the Pale may be considered as comprising the counties of Dublin, Meath, Carlow, Kilkenny, and Louth. This, although not quite exact, will be sufficient for most purposes.

Paleagas. See **POLYGARS.**

Palembang. A Dutch province in the island of Sumatra, comprehending the former kingdom of that name. In 1811 the Dutch had merely a commercial factory at Palembang, when the sultan began hostilities against them; and in order to insure their entire destruction, under pretense of conveying them safely to Batavia, sunk during the night the ships in which they had embarked by means of holes previously made. The Dutch regained Palembang in 1816. The Dutch factory was cannonaded by the sultan's forces in 1818, and the country remained in rebellion until 1821, when it was entirely conquered by the Dutch. The sultan still retains his title, but the supreme power is exercised by a Dutch regent, who resides at Palembang, the capital.

Palermo (anc. *Panormus*). A fortified city of Sicily, situated on the north side of the island. Palermo is of Phœnician origin, and is first brought into notice in 480 B.C., when the Carthaginians under Hamilcar made it their headquarters against Himera. How it came into their hands we have no means of knowing; but it continued for a long time to be their principal naval station, and the capital of their possessions in Sicily. With the exception of a short time, about 276 B.C., when it was taken by the Greeks, it continued to be the headquarters of the Carthaginians, until it was taken by the Romans during the first Punic war (254 B.C.). When Sicily was conquered by the Goths, Palermo, along with the rest of the island, fell into their hands; but it was recovered by Belisarius, and the Byzantine empire retained possession of it till 855 A.D., when it was taken by the Saracens, and made the capital of their Sicilian possessions. The Vandals and afterwards the Arabs made it the capital of the island, and after the Norman conquest it continued to be the seat of the king of Sicily. It still remained the royal residence under the Aragonese kings; but the court was removed (1269) after Sicily became united to the kingdom of Naples. In 1860 the inhabitants flocked to the standard of Garibaldi, and in the same year the city was annexed to the new kingdom of Italy.

Palestine, or Holy Land. A country of

Asia, lying along the east coast of the Mediterranean Sea, and occupying the southwestern part of Syria, which is included within the limits of the Turkish empire. It now forms the modern pashalic of Beirut or Beyrout, and part of the pashalic of Damascus. This is the country in which the principal events recorded in Scripture took place. When it was conquered by the Israelites, Joshua divided this and a portion of the country to the east of the Jordan among the twelve tribes. It was conquered, however, by the kings of Assyria, who carried captive, first Israel and then Judah, into the eastern provinces of their empire. After the conquest of Babylon by Cyrus, the Jews were allowed to return to their country, to rebuild their temple, and re-establish their ecclesiastical constitution. Judæa thus continued a province of Persia until Asia was invaded by Alexander the Great, to whom it submitted without resistance. The Jews were again exposed to oppression from some of the Ptolemies, who attempted to enforce the adoption of the idolatrous worship of the Greeks on the Jewish people. The Jews, however, under the guidance of the Maccabees, offered a most determined resistance to the Egyptian monarch who sought to deprive them of the exercise of their own religion, and Judæa once more became an independent country. It subsequently fell under the dominion of Rome, which established the Herods as tributary kings. It was at this crisis that Judæa became the theatre of those great events which form the foundation of the Christian faith. The Jews, however, having repeatedly rebelled against the authority of the Romans, Titus entered Judæa with a large force in 70, and after a long siege, during which the Jews endured terrible hardships and privations, he took Jerusalem, and razed it to the ground. The temple which had been twice rebuilt, after having been burnt by Nebuchadnezzar and plundered by Antiochus, was again destroyed. More than 1,100,000 Jews perished in the siege and destruction of the city, and about sixty-five years after the Jewish people were banished from Judæa by a decree of the emperor Hadrian. The country continued to form a part of the Roman empire until it was divided into the Eastern and Western empires, when Palestine became a province of the former. Although it was frequently invaded by the Parthians, Persians, and Saracens, it was held by the emperors of Constantinople until it was wrested from them by the last-named people in 638. It then fell under the sway of the Mohammedans, in whose power the land remained until 1099, when the Holy Land was recovered by the Crusaders, and erected into a Latin kingdom under Godfrey de Bouillon. This kingdom lasted till 1187, when it was conquered by Saladin, on the decline of whose kingdom it passed through various hands, till, in 1517, it was finally swallowed up in the Turkish empire.

Palestrina (anc. *Præneste*). An episcopal city of the present kingdom of Italy, built upon the site of one of the most ancient as well as powerful cities of Latium. We first hear of Præneste as member of the Latin League; but in 499 B.C. it quitted the confederacy and joined the cause of the Romans. In 380 B.C. the Prænestines, having rejoined their ancient allies, waged war against Rome; but were completely routed on the Allia by T. Quintus Cincinnatus, and beaten back to their own gates. They took a prominent part in the famous Latin war, 340 B.C. Having given shelter to the younger Marius in the year 82 B.C., this city was besieged by the forces of Sulla, and on its being taken, all the inhabitants were put to the sword. A military colony was then established in their place, and soon the city began to flourish anew. The town became the stronghold of the family of Colonna in the Middle Ages; but was given to the Barberini family by Urban VIII.

Palestro. A village of Piedmont, 12 miles southwest from Novara. It is famous as the scene of a battle between the Sardinians and Austrians in May, 1859. On May 30 the Piedmontese drove the Austrians from this village, and on May 31 defended it with great bravery against an Austrian attack. The Piedmontese in the battle of May 31 were assisted by 3000 French Zouaves, and on that occasion the Austrians lost 2100 men killed and wounded, 950 prisoners, and 6 pieces of cannon. On July 1 the allies entered Novara.

Palgaut. A city of India, in the south of Hindostan, captured by the British in 1790.

Palisade. To surround, inclose, or fortify with stakes or posts.

Palisades. Are strong palings 6 or 7 inches broad on each side, having about one foot of their summits sharpened in a pyramidal form. They are frequently placed at the foot of slopes as an obstacle to the enemy. A large beam or lintel, sunk about 2 or 3 feet, is often used to unite them more firmly. Their tops should be a foot above the crest of the parapet behind which they stand, and in field fortifications they form a very good obstruction, if protected from artillery. An expeditious mode of planting them is to sink a small ditch, about 2 feet 6 inches deep and the same breadth, and to nail the ends of the palisades to a piece of timber, or the trunk of a tree laid on the bottom of it, and then fill in the earth, and ram it well. The palisades should be 9 or 10 feet long, so that when finished, the ends shall be at least 7 feet above the ground. They may be made out of the stems of young trees of 6 or 8 inches diameter; but stout rails, gates with the ends knocked off, planks split in half, cart-shafts, ladders, and a variety of such things will come into play, where more regular palisades are not to be had. If the materials are weak, a cross-piece must be nailed to them near the top, to prevent their being broken down, and they must not be

placed so close together as to cover an enemy.

Palliser Gun. See **ORDNANCE, CONSTRUCTION OF**.

Palmyra. The name given by the Greeks to an ancient city of Upper Syria. It occupied a fertile oasis, 140 miles east-northeast from Damascus. Palmyra was, in the time of Solomon, a bulwark of the Hebrew kingdom against the wandering hordes of Bedouins. After the fall of Seleucia, it became a great commercial centre, and greatly increased both in wealth and magnificence after the time of Trajan, who subjected the whole country to the Roman empire. In the 3d century, Odonathus, a Syrian, founded here an empire, which, after his murder, rose to great prosperity under his wife, Zenobia, and included both Syria and Mesopotamia; but this was not of long duration, for the Roman emperor Aurelian conquered it in the year 275, and the city was soon after almost entirely destroyed in revenge for the slaughter of a Roman garrison. It never recovered from this blow, although Justinian fortified it anew. The Saracens destroyed it in 774, and in 1400 it was plundered by Tamerlane. A village called Tedmor, inhabited by a few Arab families, now occupies its site.

Palo Alto. A noted battle-field, situated near the southern extremity of Texas, between Point Isabel and Matamoras, about 9 miles northeast of the latter. Here, on May 8, 1846, the Americans, numbering 2111, under Gen. Taylor, defeated 6000 Mexicans, commanded by Gen. Arieta. The loss of the former was 32 killed (among whom was the brave Maj. Ringgold), and 47 wounded; that of the latter, 252 killed.

Paludamentum. Was a garment worn by the Romans, and differing little, if at all, from the chlamys. It was worn by the officers and principal men in time of war, who were therefore called *paludati*, and this distinguished them from the common soldiers, who, because they wore the *sagum*, were called the *sagati*. The *paludamentum*, which was generally white or red, came down to the knees, or lower, was open in front, hung loosely over the shoulders, and was fastened across the chest by a clasp.

Paly. In heraldry, divided into four or more equal parts by perpendicular lines, and of two different tinctures disposed alternately.

Pamphylia. An ancient district on the south coast of Asia Minor, with Cilicia on the east and Lycia on the west. It was originally bounded on the inland or northern side by Mount Taurus, but was afterwards enlarged, so as to reach the confines of Phrygia. The inhabitants—a mixed race of aborigines, Cilicians and Greek colonists—spoke a language the basis of which was probably Greek, but which was disfigured and corrupted by the infusion of barbaric elements. Along with Phrygia and Lycia, it fell to the share of Antigonos on

the partition of the Macedonian empire. It afterwards passed successively into the hands of the Græco-Syrian princes, the kings of Pergamus, and the Romans.

Pamplona, or Pampeluna. A fortified town of Spain, the capital of the province of Navarre, on the Arga, 89 miles southeast from St. Sebastian. Pamplona was called by the ancients *Pompeiopolis*, from the circumstance of its having been rebuilt by the sons of Pompey in 68 B.C. It was taken by Euric the Goth in 466, by the Franks under Childebert in 542, and again under Charlemagne in 778, who dismantled it. It was subsequently for a time in possession of the Moors, who corrupted the name *Pompeiopolis* into *Bambilonah*, whence the modern Pamplona. In the 11th century the three districts of the town were separately fortified. The continual intestine contests of these three fortresses caused Carlos III., in the beginning of the 15th century, to destroy the interior walls and strengthen the common bulwarks; he also erected a citadel, in the defense of which, against André de Foix, in 1521, St. Ignacio was wounded. It was taken by a stratagem by the French under D'Armagnac, and remained in their power until recaptured after a blockade by Wellington in 1818. In the civil war that followed the death of Ferdinand VII., Pamplona was the strong place of the liberals. The citadel was seized and held for a short time by O'Donnell in September, 1841.

Pan. That part of the lock of a musket, pistol, etc., which holds the priming powder, the necessity of which is superseded by the use of percussion-caps.

Pan. The distance which is comprised between the angle of the epaul and the flanked angle in a fortification.

Pan. A name well known among the shepherds of antiquity, and frequently used by modern writers in their rural fictions. In military history it signifies a man who was lieutenant-general to Bacchus and his Indian expedition. He is recorded to have been the first author of a general shout, which the Grecians practiced in the beginning of their onsets in battle.

Pan Coupé. The short length of parapet by which the salient angle of a work is sometimes cut off.

Panache (Fr.). A plume worn upon the crest of an ancient helmet; military plume or feather.

Pancarte (Fr.). An ancient exercise or tournament, which was performed in the Roman amphitheatre, when strong athletic men were opposed to all sorts of enraged animals.

Pandoor. See **PANDOUR.**

Pandosia (now Castel Franco). A town in Brutium (which see) near the frontiers of Lucania. Lævinus, the Roman consul, was defeated at Pandosia by Pyrrhus, king of Epirus, 280 B.C.

Pandour (from Pandur, a mountainous district of Hungary). The name has been

applied to that portion of the light-armed infantry in the Austrian service which is raised in the Slavonian districts on the Turkish frontier. The Pandours originally fought under the orders of their own proper chief, who was called *Harûn-Basha*, and rendered essential service to the Austrians during the Spanish War of Succession, and afterwards in the Seven Years' War. They originally fought after the fashion of the "free lances," and were a terror to the enemy, whom they annoyed incessantly. Their appearance was exceedingly picturesque, being somewhat oriental in character, and their arms consisted of a musket, pistol, a Hungarian sabre, and two Turkish poniards. Their habits of brigandage and cruelty rendered them, however, as much a terror to the people they defended as to the enemy. Since 1750 they have been gradually put under a stricter discipline, and are now incorporated with the Austrian frontier regiments.

Panic. A sudden fright; especially, a sudden fright without real cause, or terror inspired by a trifling cause, or misapprehension of danger; as, the troops were seized with a panic; they fled in a panic. These terrors are attributed to Pan, as some say, because when Osiris was bound by Typho, Pan and the satyrs appearing, cast him into a fright; or because he frightened all the giants that waged war against Jupiter; or, as others say, that when Pan was Bacchus's lieutenant-general in his Indian expedition, being encompassed in a valley by an army of enemies far superior to them in number, he advised the god to order his men to give a general shout, which so surprised the enemy that they immediately fled from their camp. And hence it came to pass that all sudden fears impressed upon men's spirits without any just reason were, by the Greeks and Romans, called *panic terrors*.

Panic-stricken. Struck with a panic or sudden fear; as, the troops were panic-stricken.

Paniput, or Paneeput. A town of British India, capital of a district of the same name in the territorial division of Delhi, Northwest Provinces, 78 miles north of Delhi, and 965 miles northwest of Calcutta. The neighborhood of Paniput, lying in the great military highway between Eastern India and Afghanistan, has been at various times the field of great battles. The first great battle of Paniput was fought in 1526, and gained by Mirza Baber, the ex-ruler of Ferghana, at the head of 12,000 Mongols, over Ibrahim, the emperor of Delhi, whose unwarlike array numbered 100,000 men, with 1000 elephants. This victory seated Baber on the throne of Hindostan as the first of the "Great Mogul" dynasty. The second great battle was fought in 1556 by the Mongols under Akbar, grandson of Baber, and third of the Mogul emperors, against Hemu, an Indian prince, who had usurped the throne of Delhi. Hemu's army was de-

feated with great slaughter, and himself slain. The *third* battle was fought on January 14, 1761, between Ahmed Abdalli, ruler of Afghanistan, and the till then invincible Mahrattas. The Jats, who had been forced to join the Mahrattas, deserted to the Afghans at a time when victory seemed to be declaring for the former; and this act of treachery, together with the loss of their leaders, threw the Mahrattas into confusion, and in spite of their most resolute valor they suffered a total defeat. They left 50,000 slain on the field of battle, including all their leaders except Holkar, and 80,000 men were killed in the pursuit, which was continued for four days. It was at Kurnaul, a town a little to the north of Paniput, that Nadir Shah of Persia, in 1739, won the celebrated battle over the Mogul emperor, which placed Northwestern India at his feet.

Pannels. Are the carriages upon which mortars and their beds are conveyed upon a march.

Pannier. A shield of basket-work formerly used by archers, who set them up in their front. Also a basket, usually slung in pairs over the back of a beast of burden to carry a load. The term is also applied to leather bags to be used in the same way, and especially to cases for carrying medicines.

Pannonia. A province of the ancient Roman empire, bounded on the north and east by the Danube, on the west by the mountains of Noricum, and on the south reaching a little way across the Save; and thus including part of modern Hungary, Slavonia, parts of Bosnia, of Croatia, and of Carniola, Styria, and Lower Austria. The Pannonians (Pannonii) were a brave, warlike people. They maintained their independence of Rome till Augustus, after his conquest of the Illyrians (35 B.C.), turned his arms against them; they were shortly afterwards subdued by his general Vibius. In 7, the Pannonians joined the Dalmatians and the other Illyrian tribes in their revolt from Rome, and were with difficulty conquered by Tiberius, after a desperate struggle, which lasted three years (7-9). The dangerous mutiny (14) of the Roman troops which were garrisoned in Pannonia was with difficulty quelled by Drusus. Fifteen legions had to be assembled against the Pannonians, who mustered 200,000 warriors. Great numbers of the Pannonian youth were drafted into the Roman legions, and proved, when disciplined, among the bravest and most effective soldiers in the imperial army. Pannonia was subsequently divided into Upper and Lower Pannonia. Upper Pannonia was the scene of the Marcomannic war in the 2d century. In the 5th century it was transferred from the Western to the Eastern empire, and afterwards given up to the Huns. After Attila's death, in 453, the Ostrogoths obtained possession of it. The Longobards under Alboin made themselves masters of it in 527, and relinquished it to the Avari upon commencing their expedi-

tion to Italy. The Magyars, or Hungarians, took it in the end of the 9th century.

Panonceau (Fr.). An ancient name for an ensign or banner.

Panoply. Complete armor, or harness.

Papagos. A tribe of Indians closely allied to the Pimas, who reside on a reservation on the Santa Cruz River, in Arizona. They were converted to Christianity by Spanish missionaries at an early date, and are a peaceable and industrious race.

Papal States, or States of the Church.

A territory, or rather group of states in Central Italy, formerly united into one sovereignty, with the pope for its head. The Papal States were bounded on the north by the Po, on the south by Naples, on the east by the Gulf of Venice and Naples, and on the west by Modena, Tuscany, and the Tyrrhenian Sea. Detached portions, as Benevento and Pontecorvo, lay within the Neapolitan territory. About 720, Gregory III. having quarreled with the emperor Leo the Isaurian, declared the independence of Rome. In 726, Pepin le Bref compelled the Lombard king to hand over Ravenna, Rimini, Pesaro, Fano, Cesena, Urbino, Forli, Comacchio, and fifteen other towns to the pope, who now assumed the state of a temporal sovereign. Pepin's example was followed by his son Charlemagne. In the 11th century, the Normans greatly aided to increase the papal temporal authority, and in 1053 the duchy of Benevento was annexed. In 1278 the emperor Rodolf I. confirmed the popes in the acquisitions thus obtained, defined the boundaries of the Papal States, and absolved their inhabitants from their oath of allegiance to the empire. Sixtus IV. in the end of the 15th century annexed the Romagna to his dominions. By the victory of the French at Marignan (1515), the very existence of the papal power was threatened. In 1598 the possessions of the house of Este, viz.: Ferrara, Comacchio, and a part of the Romagna, were seized by Pope Clement VIII.; and the Papal States received their final additions in Urbino (1623), Ronciglione, and the duchy of Castro (1650). The Romagna was seized by Napoleon in 1797, and incorporated in the Cisalpine Republic; and in the following year Rome was taken by the French, and the Papal States erected into the *Roman Republic*. Pius VII., in 1800, obtained possession of his states, but they were almost immediately retaken by the French. In 1814, the pope returned to his dominions, and was formally reinstated by the treaty of Vienna. In 1830, the people of Ancona and Bologna rose in rebellion; they were put down by the aid of an Austrian army. The Bolognese again rebelled; and this revolt supplied Austria with a pretext for occupying the northern Legations, and the French at the same time garrisoned Ancona. Occasional risings took place from time to time up to 1846. In 1848, the people rose, and Pius IX. fled to Gaeta, whilst Rome was proclaimed a republic. He was

restored and his subjects reduced to submission by the arms of France, Austria, Naples, and Spain. The Austrians held the Legations in subjection to the pope's authority till 1859; the French occupied Rome in his behalf till 1870. In July, 1859, the four northern Legations (the Romagna) taking advantage of the withdrawal of the Austrian troops, threw off the papal authority, and proclaimed their annexation to Sardinia, which was formally acknowledged by Victor Emmanuel in March, 1860. The pope now raised a large body of troops, appointing Lamoricière, an eminent French general, to command them, for the purpose of resisting any further encroachments on his dominions; but the news of Garibaldi's success in Sicily and Naples produced revolt in the Legation of Urbino and in the Marches, the people proclaiming Victor Emmanuel. The Sardinians accordingly marched into the Papal States, defeated Lamoricière, who retired into Ancona, where he was compelled to surrender with his whole army. The revolted provinces of Umbria, Urbino, and the Marches, and part of Frosinone were annexed to Sardinia. In September, 1870, the remaining states were occupied by the Italian troops, and the pope was removed from temporal power. On October 2, 1870, the people pronounced their annexation to the kingdom of Italy, with which the territory of the States of the Church was incorporated by decree of October 9, and Gen. Marmora appointed governor of the new provinces.

Papegai (*Fr.*). A popinjay; a bird made of wood or pasteboard, stuck upon a lance, and used as a mark when practicing with the bow, cross-bow, musket, etc.

Paper Shell. See PYROTECHNY.

Paper Time-fuze. See LABORATORY STORES.

Paphlagonia. Was a country of Asia Minor, separated from Pontus on the east by the river Halys (*Kizil Ernak*), and from Bithynia on the west by the river Parthenius (*Bartan-Su*), and bounded on the north by the Euxine, and on the south by Galatia. Its limits, however, were somewhat different at different times. The Paphlagonians are supposed to have been of Syrian, or at least of Semitic origin, and were a wild and warlike people. Cæsar made Paphlagonia a part of the kingdom of Lydia, and Cyrus united it to Persia; it subsequently became part of the empire of Alexander the Great, and afterwards of the kingdom of Pontus, was included in the Roman province of Galatia, and in the 4th century of the Christian era was made a separate province by Constantine.

Papilio (*Fr.*). A square Roman tent for eight men.

Parachute Light Ball. A thin shell, the upper half of which is blown off by the charge at a certain height. The lower half filled with composition, which is kindled by the explosion, is kept floating in the air by

means of a small parachute, which is set free when the upper half of the shell flies off.

Parade. Signifies in its original sense a prepared ground, and was applied to the court-yard of a castle, or to any inclosed and level plain. From the practice of reviewing troops at such a spot, the review itself has acquired the name of parade.

Parade. To assemble troops in a uniform manner for the purpose of regular muster, exercise, and inspection. The parades are general, regimental, or private (troop, battery, or company), according to the strength of the force assembled.

Parade. In camp, is that spot of ground in the front of each encampment, between the camp colors, on the right and left wings.

Parade, Dress. A parade which takes place in the U. S. army at the troop or retreat on each evening, when the soldiers appear in full uniform and under arms.

Parade, Evening. The hour generally fixed for the evening parade is at sunset. When troops are encamped, the signal for evening parade is given from the park of artillery, by the discharge of a piece of ordnance called the evening gun.

Parade Guard Mounting. The parading of the soldiers who are to go on guard.

Parade, Morning. In every garrison town, fortified place, and camp, as well as in every town through which soldiers pass, or occasionally halt, a certain hour in the morning is fixed for the assembling of the different corps, troops, or companies, in regular order.

Parade Officer. An officer who attends to the minutiae of regimental duty, but who is not remarkable for military science.

Parade Rest. A position of rest for soldiers, in which, however, they are required to be silent and motionless, used specially at parade; also, the command for the position.

Parade, Troop. Morning parade (which see).

Parade-ground. The piece of ground on which soldiers are paraded.

Parados. An elevation of earth which is effected behind fortified places, to secure them from any sudden attack that may be made in reverse.

Parætonium, or Ammonia. Formerly an important city on the northeast coast of Africa. It was a strong fortress; restored by Justinian, and continued a place of some consequence till its complete destruction by Mehemet Ali in 1820.

Paraguay. A republic in South America, discovered by Sebastian Cabot in 1526; conquered by Alvarez Nufiez in 1535, and civilized by the Jesuits, who in 1608 commenced their missions there, and established an exclusive government, which they held until their expulsion in 1763. Paraguay rose against the Spanish yoke in 1811, and achieved its independence. Paraguay was recognized as an independent state by the Argentine Confederation in 1852, and by

Great Britain in 1858. On November 11, 1864, hostilities between Paraguay and Brazil began, when a Brazilian steamer was captured as an intruder on Paraguayan waters; in the same year Brazil was invaded by the Paraguayans, and on April 14, 1865, Lopez (president of the republic) invaded the territories of the Argentine Republic, which immediately made alliance with Brazil. In September, 1865, the army of Lopez was defeated. The war continued almost without intermission until 1870, when Lopez was killed. Since that time Paraguay, though nominally independent, has been almost completely under control of Brazil.

Parallels. Are trenches cut in the ground before a fortress, roughly parallel to its defenses, for the purpose of giving cover to the besiegers from the guns of the place. The parallels are usually three, with zigzag trenches leading from one to another. The old rule used to be to dig the first at 600 yards' distance; but the improvements in artillery have rendered a greater distance necessary, and at Sebastopol the allies made their first trench 2000 yards from the walls. The third trench is very near to the besieged works, and from it saps and zigzag approaches are directed to the covert way. See **SIERGE**.

Paramount. The highest in rank or order; the chief.

Parapets (Ital. *parapetto*, "breast-guard"). In fortifications, are breastworks, walls, or bulwarks of earth, brick, wood, iron, stone, or other material. The battlement around a flat roof, or the railing of a bridge is also called a parapet. The parapets of field-works are always made of earth, which is also largely used in permanent fortifications. Earth has great advantages for this purpose, being readily obtained, easily handled, and affords good cover on account of the absence of splinters and flying fragments when struck by a shot. The presence of rock or large gravel in the earth is objectionable for this reason. Of the different earths, sand, hard clay, tufa, etc., resist penetration better than rich soils. The profile of the parapet is determined by its location and purpose. The earth to form it is taken from the ditch, which is sometimes in front and sometimes in rear. In inclosed works, or works built at leisure, the ditch is always on the outside, leaving the natural surface for the parade. Works built hastily, or under fire, have the ditch on the inside. In this way cover is more rapidly obtained. This form of parapet is used in all the trenches in siege operations and the temporary lines thrown up on the field of battle. The *command of a parapet* is the height of the interior crest above the site. For isolated works the command should be at least 8 feet, as the chances of a successful resistance increase with the command. The profile of a parapet is a section taken at right angles to its length. In infantry parapets the *banquette* is the bank of earth in rear of the parapet,

on which the troops stand to deliver their fire. This is usually about 4 feet wide, and about 4 feet 8 inches below the interior crest. The height of the banquette depends upon the command of the parapet. The *interior slope* of the parapet, against which the soldier leans in firing, has a slope of 8 on 1. To support the earth at this inclination a revetment of sand-bags, fascines, gabions, sod, pisa, or plank, is used. The *superior slope* of the parapet is usually 1 on 6. It should be steep enough to give a fire just above the farther edge of the ditch, but not so steep as to weaken the parapet. The *exterior slope* is 1 on 1, or the natural slope of the earth. If it is made steeper than this it will be beaten down by the projectiles of the enemy; if less steep, it will offer a less obstacle to open assault. The *berme*, or space between the foot of the exterior slope and the edge of the ditch, is objectionable, in offering a breathing-place to the enemy in the assault, but it is usually necessary to prevent the weight of the parapet from crushing in the scarp. The dimensions of the ditch are regulated by the amount of earth necessary to form the parapet. The scarp and counterscarp are made as steep as the stiffness of the soil will allow. As a general rule, the depth of the ditch should not be less than 6 feet, and its width should not be less than 12. The greatest width is regulated by the superior slope of the parapet, the line of which produced should not pass below the crest of the counterscarp. In excavating near a salient it will be found that more earth is furnished than in re-enterings. On this account the width of the ditch is usually made variable, being less at the salients than elsewhere.

The thickness of a parapet is the horizontal distance between the interior and exterior crests. This thickness should be one-half greater than the penetration of the projectiles it is designed to resist. As the rifled guns now in use have much greater penetration than the smooth-bored of former times, a proportionate increase in the dimensions of parapets has become necessary. The parapets of semi-permanent field-works are usually calculated to resist the fire of siege-guns; those of permanent works to resist the most powerful ordnance in use. The trenches so much used in modern times to cover operations of armies in the field are shallow ditches, with the earth thrown outwards.

Parasang. A Persian military measure, sometimes assumed as a league, but equal to about 4 English miles.

Parbuckle. To hoist or lower by means of a parbuckle.

Parbuckles. Are 4-inch ropes, 12 feet long, with a hook at one end and a loop at the other. To parbuckle a gun, is to roll it in either direction from the spot in which it rests. To do this, place the gun on skids, and if it is to be moved up or down a slope, two 4½-inch ropes are made fast to

some place on the upper part of the slope, the ends are carried under the chase and breech of the gun respectively, round it and up the slope. If the running ends of these ropes are hauled upon, the gun ascends; if eased off, it descends. If the ground is horizontal, handspikes only are necessary to move the gun.

Parcourir (*Fr.*). In a military sense, to run over the ground during an action. This word is particularly applicable to those movements which are made by general officers, officers commanding brigades, etc., for the purpose of encouraging their soldiers in the heat of an engagement.

Pardon and Mitigation of Sentences. See APPENDIX, ARTICLES OF WAR, 112.

Parga. A town of European Turkey, eyalet of Yanina, stands on a rocky peninsula on the shore of the Mediterranean, and is defended by a citadel which is nearly impregnable. It has played a part of some importance in history since the beginning of the 16th century. It maintained its independence, under the protection of Venice, from this period till the fall of the Venetian power in 1797, when it was for a short time garrisoned by the French. Ali Pasha, the governor of Yanina, obtained command of it in 1800, and in 1814 besieged it, on account of the inhabitants refusing to submit to his rule; and as the French would not defend them, the inhabitants applied for aid to the British, who took possession of the citadel. Parga was finally given up to Turkey by the treaty of 1819; but the inhabitants, not wishing to come under the Ottoman sway, migrated to the Ionian Islands, and the town was then occupied by the Turks.

Paris (anc. *Lutetia Parisiorum*). The metropolis of France, and after London, the most populous city in Christendom, is situated on both sides of the Seine, and is surrounded by walls and a strong line of fortifications. When Caesar conquered Gaul, he rebuilt Lutetia, which had been nearly destroyed through the obstinacy of the Celtic tribe who here had their stronghold, and it rose to be a place of considerable importance during the 500 years of Roman dominion. In the beginning of the 6th century it suffered much from the northern hordes, and ultimately fell into the hands of the Franks, headed by Clovis, who, having embraced Christianity, made it his residence in 508. In 845 the city was ravaged by the Normans, and in 845 and 920 suffered from famine; in 885 it was gallantly defended by the Count Eudes and the Bishop Goslin against the Danes; in 1281 it was rebuilt; and in 1411-18 suffered by the factions of the Armagnacs and Burgundians; taken by the English in 1420, and retaken by the French in 1436; on August 24, 1572, the massacre of St. Bartholomew occurred; in 1589-90 Henry IV. vainly besieged it, and he entered it in March, 1594; surrendered to the allies on March 30, 1814. Paris was the scene of many revolutions from July,

1880, to February 22, 1848. The following are the great treaties of Paris: Between England, France, Spain, and Portugal, cession of Canada to Great Britain by France, and Florida by Spain, on February 10, 1763; between France and Sardinia; the latter ceding Savoy, May 15, 1796; France and Sweden, whereby Swedish Pomerania and the island of Rugen were given up to the Swedes, who agreed to adopt the French prohibitory system against Great Britain, January 6, 1810; on April 11, 1814, Paris capitulated, and Napoleon renounced the sovereignty of France; the convention of Paris, between France and the allied powers, the boundaries of France to be the same as on the first day of January, 1792; peace of Paris ratified by France and all the allies on May 14, 1814; convention of St. Cloud, between Marshal Davoust, Wellington, and Blücher, for the surrender of Paris, July 3, 1815, and the allies entered it on July 6; treaty of Paris, between Great Britain, Austria, Russia, and Prussia, styling Napoleon the prisoner of those powers, and confiding his safeguard to England on August 2, 1815; establishing the boundaries of France, and stipulating for the occupation of certain fortresses by foreign troops for three years, on November 20, same year, and the treaty of Paris, confirming the treaties of Chaumont and Vienna, same day; treaty between Russia and Turkey, England, France, and Sardinia, March 30, 1856; another between England and Persia, March 4, 1857; the treaty between the European powers, Prussia, and Switzerland, respecting Neuchâtel, May 26, 1857; and the convention between France and Italy for withdrawal of French troops from Rome, September 15, 1864. In the late war with Prussia the armies of France having been defeated by the Germans, on August 7, 1870, Paris was declared in a state of siege. On September 4, a republic was proclaimed and a "provisional government of national defense" instituted under the presidency of Gen. Trochu. On September 20, Paris was invested by the Germans, and communication was kept up with the outer world by means of pigeons and balloon mails. On October 30, riot reigned in Paris, and the members of the provisional government were arrested and held prisoners for several hours. On November 28, 800,000 troops supported by 700 field-pieces, divided into three corps, were concentrated at points around the city under Gen. Trochu as commander-in-chief. Early in January the bombardment was begun, and continued most of the month without serious injury. The city, nearly reduced to starvation and threatened with intestine commotion, surrendered on January 28, with 1900 pieces of artillery, 180,000 prisoners, a forced contribution of 200,000,000 francs having been levied by the enemy. The National Assembly having ratified the preliminaries of peace on February 28, the German troops, who, to the number of 80,000,

had occupied a quarter of Paris, quietly withdrew. The terms of peace proving distasteful to the populace, Paris was soon plunged into political chaos, and sanguinary conflicts followed between the government of the Commune, or Red Republicans, and the Versailles government under the presidency of Thiers.

Park. The space occupied by the animals, wagons, pontons, and materials of all kinds, whether of powder, ordnance stores, hospital stores, provisions, etc., of an army when brought together; as, a park of wagons; a park of artillery; a park of provisions; engineer park, and the like.

Park. To bring together in a park, or compact body; as, to park the artillery, etc.

Parley. An oral conference with an enemy. It takes place under a flag of truce, and usually at some spot—for the time neutral—between the two armies. *To beat a parley*, is to give a signal for such a conference by beat of drum or sound of trumpet.

Parma. A kind of round buckler used by the velites in the Roman army. It was 8 feet in diameter, made of wood and covered with leather. Its form was round, and its substance strong; but Servius on the *Æneid*, and even Virgil, say that it was a light piece of armor in comparison with the clypeus, though larger than the pelta.

Parma. A city of Italy, situated on a river of the same name, about 72 miles southeast of Milan. It is supposed to be of Etruscan origin, but is first mentioned as a Roman colony, having become of considerable importance in the time of the republic. It took a prominent part against Antony in 48 B.C., and was in consequence taken by that general and plundered by his troops. Under Augustus it received a fresh colony, and it again rose to be one of the principal towns of this populous and flourishing part of Italy. In 877 a colony of Goths was settled in the territory of Parma by order of Gratian; Attila devastated and plundered it; and it was taken by Narses in his wars against the Goths and their allies. In 1247, Frederick II. besieged it without success. It subsequently became a prey to feudal lords, and afterwards fell into the hands of the popes. Parma is now part of the province of *Æmilia*, in the kingdom of Italy, to which it was annexed March 18, 1860.

Parma, Battles of. An indecisive engagement took place at Parma, June 29, 1784, between the confederated armies of England, France, and Spain and the Austrians; and on June 19, 1799, the French under Macdonald were routed by the Russians under Suwarrow, with a loss of 4 generals and 10,000 men.

Paroi (Fr.). A stout wooden frame having long, sharp-pointed stakes driven into it horizontally; it is placed upon the parapet to oppose scaling parties.

Parole. A watch-word differing from the countersign (which see) in that it is only communicated to officers of guards, while

the countersign is given to all the members. The parole is usually the name of a person, generally a distinguished officer, while the countersign is the name of a place, as of a battle-field. It is also the declaration made on honor by an officer, in a case in which there is no more than his sense of honor to restrain him from breaking his word. Thus, a prisoner of war may be released from actual prison on his parole that he will not go beyond certain designated limits; or he may even be allowed to return to his own country on his parole not to fight again during the existing war against his captors. To break *parole* is accounted infamous in all civilized nations, and an officer who has so far forgotten his position as a gentleman ceases to have any claim to the treatment of an honorable man, nor can he expect quarter should he again fall into the hands of the enemy he has deceived.

Paros. One of the larger islands of the Grecian archipelago, situated west of Naxos. In ancient times, it is said to have been colonized by Cretans, and was very wealthy and powerful. It submitted to the Persians; and after the battle of Marathon was assailed ineffectually by Miltiades, who received here the wound of which he soon after died. After the death of Xerxes, Paros came under the supremacy of Athens, and shared the fate of the other Cyclades.

Parrain (Fr.). In military orders, the person who introduces or presents a newly-elected knight. The term is also used to signify the comrade who is selected by a soldier who is condemned to be shot to bind the handkerchief over his eyes.

Parrott Gun. See **ORDNANCE, CONSTRUCTION OF.**

Parrott Projectile. See **PROJECTILE.**

Parry. To ward off; to stop or to put or turn off; to prevent; as, to parry a thrust, a blow, or the like, or anything that means or threatens harm.

Parry. A defensive movement in sword and bayonet exercises; also a command; as, *tierce parry*, *quarte parry*, etc.

Parrying. The action of warding off the push or blow aimed at one by the other.

Parsees, or Guebres. The followers of Zerdusht, dwelt in Persia till 638, when, at the battle of Kadsah, their army was decimated by the Arabs, and the monarchy annihilated at the battle of Nâhârand in 641. Many submitted to the conquerors (and their descendants are termed Guebres), but others fled to India, and their descendants still reside at Bombay (where they are termed Parsees), where they numbered 114,698 in 1849.

Parsons Gun. See **ORDNANCE, CONSTRUCTION OF.**

Parsonstown (anc. Birr). A considerable inland town on the river Brosna, in King's Co., Ireland, 69 miles west-southwest from Dublin. Birr was the scene of many important events, both in the Irish and in the post-invasion period. The castle, which was

anciently the seat of the O'Carrolls, was granted by Henry II. to Philip de Worcester; but it frequently changed masters, and even alternated between English and Irish hands. Through the entire period of the civil wars it was constantly disputed, until after 1690, when the Parsons family was finally established in possession of the castle and adjoining lands. Parsonstown is a large military station.

Partheniæ. A word derived from the Greek, signifying children born of unmarried women. The name was applied to a particular class of citizens in Sparta after the Messenian war, whose origin was ascribed to the following circumstances: The Spartans having been at war with the Messenians for twenty years, and having by that means very much depopulated their country, and apprehending that if the war continued it might eventually strip Sparta of all its male inhabitants, they sent some of their young men from the army into the city, with license to be familiar with as many unmarried women as they would; and the children begotten by them in this manner were called *partheniæ*, on account of the uncertainty as to who were their fathers. At the end of the war, this brood were deemed bastards, and were denied the bearing of any office in the government, etc. This unjust exclusion enraged them so much that they conspired with the slaves to destroy all the nobility; but, on the discovery of their plot, they were driven out of the city; after which, being headed by Phalantus, a bold and enterprising son of chance, they traveled into Magna Grecia in Italy, and built Tarentum.

Parthenopean Republic. Was the name given to the state into which the kingdom of Naples was transformed by the French republicans, January 28, 1799, and which only lasted till the following June, when the invading army was forced to retreat.

Parthia. Anciently a country of Western Asia, lying at the southeast end of the Caspian Sea, from which it was separated by a narrow strip, known as Hyrcania, now forms the northern portion of Khorassan, and is an almost wholly mountainous region. The original inhabitants are believed to have been of Scythian race, as shown by their language as well as by their manners, and to belong to the great Indo-Germanic family. The Parthians, during the time of the Roman republic, were distinguished by primitive simplicity of life and extreme bravery, though, at the same time, much given to bacchanalian and voluptuous pleasures. They neglected agriculture and commerce, devoting their whole time to predatory expeditions and warfare. They fought on horseback, and after a peculiar fashion. Being armed solely with bows and arrows, they were rendered defenseless after the first discharge, and, to gain time for adjusting a second arrow to the bow, turned their horses, and retired, as if in full flight; but

an enemy incautiously pursuing was immediately assailed by a second flight of arrows; a second pretended flight followed, and the conflict was thus carried on till the Parthians gained the victory, or exhausted their quivers. They generally discharged their arrows backwards, holding the bow behind the shoulder; a mode of attack more dangerous to a pursuing enemy than to one in order of battle. The Parthians first appeared in history as subject to the great Persian empire. After the death of Alexander the Great, Parthia formed part of the Syrian kingdom, but revolted under Antiochus II., and constituted itself into an independent kingdom under the *Arsacids*, 250 B.C., a race of kings who exercised the most completely despotic authority ever known. The Parthian dominion rapidly became a most powerful and flourishing empire. In spite of repeated attacks on the part of the Romans, the Parthians maintained their independence; and though Trajan, in 115-116, seized certain portions of the country, the Romans were soon compelled to abandon them. In 214, during the reign of Artabanus IV., the last of the *Arsacids*, a revolt headed by Ardshir, son of Babegan, broke out in Persia, and the Parthian monarch, beaten in three engagements, lost his throne and life, while the victor substituted the Persian dynasty of the *Sassanids* for that of the *Arsacids*. Some scions of the Parthian royal family continued for several centuries to rule over the mountainous district of Armenia, under the protection of the Romans, and made frequent descents upon Assyria and Babylonia.

Partiality. An unequal state of judgment or leaning in favor of one of two parties. Every member of a court-martial is sworn to do justice, without partiality, favor, or affection. A previous opinion expressed by a member, before the court is sworn, is deemed a good and sufficient cause of challenge by either the prisoner or prosecutor, and the individual cannot sit on the trial and judgment of the case.

Partisan. The name given to small corps detached from the main body of an army, and acting independently against the enemy. In partisan warfare much liberty is allowed to partisans. Continually annoying the flanks and rear of columns, they intercept convoys, cut off communications, attack detachments, and endeavor to spread terror everywhere. This kind of warfare is advantageously pursued only in mountainous or thickly-wooded districts. In an open country, cavalry very readily destroys partisans. The Spanish race make active partisans. The party is called *guerrilla*, the partisan a *guerrillero*.

Partisan. A term formerly applied to a pike or halbert.

Partition Lines. In heraldry, lines dividing the shield in directions corresponding to the ordinaries. According to the direction of the partition lines, a shield is

said to be party or parted per fess, per pale, per bend, per chevron, per saltire; a shield divided by lines in the direction of a cross is said to be quartered; and a shield parted at once per cross and per saltire is said to be gironné of eight. The partition lines are not always plain; they may be enrailed, invected, embattled, wavy, nebuly, indented, dancetté, or raguly.

Partridges. In artillery, were very large bombards, formerly in use at sieges and in defensive works.

Parts, Bridges By. See PONTONS.

Party. A small detachment of men, horse or foot, sent upon any kind of duty; as, into an enemy's country, to pillage, to take prisoners, and oblige the country to come under contribution.

Party. In heraldry, parted or divided;—used with reference to any division of a field or charge.

Party, Firing. Are those who are selected to fire over the grave of any one interred with military honors.

Party, Recruiting. Is a certain number of men, under an officer or non-commissioned officer, detached from their respective regiments for the purpose of enlisting men.

Party, Working. See WORKING PARTY.

Pas de Sourc (Fr.). Steps leading from the bottom to the top of a ditch in permanent fortification.

Pasha, or Bashaw (from the Persian *padishah*, "powerful ruler"). A title applied in the Ottoman empire to governors of provinces, or military and naval commanders of high rank. The distinctive badge of a pasha is a horse-tail, waving from the end of a staff crowned with a gilt ball; in war, this badge is always carried before him when he goes abroad, and is at other times planted in front of his tent. There are three grades of pashas, which are distinguished by the number of horse-tails on their standards; those of the highest rank are pashas of three tails, and include, in general, the highest functionaries, civil and military. All pashas of this class have the title of vizier. The pashas of two tails are the governors of provinces, who are generally called by the simple title "pasha." The pashas of one tail, the lowest rank of pashas, are provincial governors. See HORSE-TAIL.

Pass. A straight, difficult, and narrow passage, which, well defended, shuts up the entrance to a country.

Pass. A certificate of leave of absence given to a soldier for a short period.

Pass of Arms. In ancient chivalry, a bridge, road, etc., which the knights undertook to defend, and which was not to be passed without fighting the person who kept it. He who was disposed to dispute the pass touched one of the armories of the other knight who held the pass, that were hung on pales, columns, etc., erected for the purpose; and this was a challenge which the other was obliged to accept. The van-

quished gave the conqueror such prize as was agreed on.

Pass, To. Is to march in review by open order of columns, for the purpose of saluting.

Passable. Capable of being passed, traveled, traversed, or the like; as, the roads are not passable for troops.

Passade, or Passado. In fencing, a push or thrust; also, a sudden movement to the front.

Passage. A pass or encounter; as, a passage at arms.

Passage of Ditches. In siege operations the passage of a dry ditch consists in the *descent* (which is by a blindage, if the ditch is not too deep, or a blindage and gallery for deep ditches) and a full sap, which leads from the outlet of the *descent* to the bottom of the breach. The passage of a wet ditch is more difficult, and specially perilous if the besieged can produce sudden freshets by flood-gates or other contrivance. The method usually followed is to build a dike or bridge of fascines and hurdles across the ditch. The abutment for this bridge is formed by excavating a grand gallery behind the counterscarp and throwing the earth taken from it into the ditch through the outlet of the *descent*. The dike is carried forward from this abutment by sappers, who work on a raft carrying a musket-proof mask on the side of the enemy. A gabionade parapet on the exposed side of the dike serves to protect the men in bringing forward the fascines, hurdles, etc., to extend the dike.

Passage of Rivers. The passage is effected by surprise or by main force, and detachments are thrown by one means or the other upon the enemy's bank of the river before proceeding to the construction of bridges. The passage by force ought always to be favored by diversions upon other points. Infantry cross bridges without keeping step. Cavalry dismount in crossing, leading their horses. Wagons heavily loaded pass at a gallop.

Passages. Are openings cut in the parapet of the covered way, close to the traverses, in order to continue the communication through all parts of the covered way. See TRAVERSES.

Passandeau (Fr.). An ancient 8-pounder gun, which was 15 feet long, and weighed about 3500 pounds.

Passant. A heraldic term, used to express the attitude of an animal in a walking position, with his head straight before him.

Passarowitz. A well-built town of European Turkey, in the province of Servia, 5 miles south of the Danube, and 15 miles east of Semendria. The town is chiefly noteworthy for the treaty which was signed here by Prince Eugène and the grand viziers, July 21, 1718. By this treaty, which put an end to the war undertaken by the Turks against Venice in 1714 for the conquest of the Morea, a truce of twenty-five years was

established, and the Banat of Temesvars, the western portion of Wallachia and Servia, the town and territory of Belgrade, and a part of Bosnia, were secured to the house of Austria.

Passau. A picturesque, fortified, frontier town of Bavaria, at the confluence of the Inn and the Ilz with the Danube, 90 miles east-northeast from Munich. Fort Oberhaus, on the left bank of the Danube, stands on steep wooded cliffs, at an elevation of upwards of 400 feet, and commands the passage of both the Inn and Danube, besides which the town is further defended by the castle of Niederhause, and by ten detached forts. The treaty whereby religious freedom was established, was ratified here between the emperor Charles V. and the Protestant princes of Germany, July 31, 1552.

Pass-box. See IMPLEMENTS.

Passergades. In ancient armor, were ridges on the shoulder-pieces to turn the blow of a lance.

Passé-Mur. An ancient 16-pounder gun, 18 feet long, weighing 4200 pounds.

Passes-Balles (Fr.). Boards or machines made of iron or brass, used in disparting cannon, and fitted to every species of caliber.

Passion Cross. A cross of the form on which our Saviour suffered, with a long stem and a short traverse near the top. It is of occasional occurrence as a heraldic charge, though less frequent than many other varieties of cross. A passion cross, when elevated on three steps or degrees (which have been said by heralds to represent the virtues of Faith, Hope, and Charity), is called a Cross Calvary.

Passive Operations. Are operations the object of which is solely to repel an attack of the enemy and thus prevent his advance.

Pass-parole. An order passed from front to rear of an army by word of mouth.

Passport. A document given by the competent officer of a state, which permits the person therein named to pass or travel from place to place by land or water. Also a license granted in time of war for the removal of persons and effects from a hostile country; a safe-conduct.

Pataremo. A sort of small swivel artillery, having a movable chamber.

Patavium (now Padova, or Padua). An ancient town of the Veneti in the north of Italy, on the Medoacus Minor, and on the road from Mutina to Altinum. In 802 B.C. it was powerful enough to drive back the Spartan king Cleomenes with great loss when he attempted to plunder the surrounding country. It was plundered by Attila; and in consequence of a revolt of its citizens, it was subsequently destroyed by Agilolf, king of the Longobards, and razed to the ground.

Patay. A town of France, department of Loiret, 14 miles northwest of Orleans, where John of Arc, the Maid of Orleans, was present, when the Earl of Richemont signally defeated the English, June 18, 1429.

Talbot was taken prisoner, and the valiant Fastolfe was forced to fly. In consequence, Charles VII. of France entered Rheims in triumph, and was crowned July 17, following year, Joan of Arc assisting in the ceremony in full armor, and holding the sword of state.

Patched-up Peace, The. In French history, the name given to a treaty of peace between the Duke of Orleans and John of Burgundy, in 1409.

Pâté (Fr.). In fortification, a sort of horseshoe, that is, a platform or terre-plein, irregularly built, yet generally constructed in an oval form. It is surrounded by a parapet, without anything to flank it, and having no other defense than what is front or fore right. *Pâtés* are usually erected in marshy grounds to cover the gate of a fortified town or place. Also an iron or earthen pot filled with powder and grenades for throwing against besiegers; some were used at Lille in 1708.

Patereros. Were small pieces of ordnance, now obsolete, worked on swivels; most commonly used on board of ships, where they were mounted on the gunwale, and discharged showers of old nails, etc., into hostile boats. The French called them *Pierriers*, from loading them with stones.

Patience. The power or faculty of suffering; endurance; the power of expecting long, without rage or discontent; the power of supporting faults or injuries, without revenge; long suffering. In military life, patience is an essential requisite. Without patience half the toils of war would be insupportable; with patience there are scarcely any hardships but what coolness, courage, and ability may overcome. It is one of the greatest virtues, indeed, in an officer or soldier patiently to support, not only the rigor of discipline, but the keen and vexatious circumstances of disappointment.

Patna, or Pattana. A town of British India, capital of a district of the same name, in the presidency of Bengal, on the right bank of the Ganges, 10 miles east of Dinapore, and 877 miles northwest of Calcutta. Factories were established here at an early period by the British. In 1768 disputes began to arise between Meer Cossim, the nawaub of Bengal and Behar, and the servants of the East India Company, about the transit dues levied on native traders, from which the English claimed exemption. The nawaub for some time refused to accede to these demands; but finally he abolished all the imposts, both on British and native goods, a step which was not desired by the Company, and which must have greatly diminished his revenues. In revenge for this injury, he proceeded in various ways to annoy the British; and at length went so far as to seize some of their boats on the Ganges. On this Mr. Ellis, the chief of the factory at Patna, made an attack on the city and took possession of it, although Meer Cossim soon afterwards recovered it, and

forced the British to take refuge in the factory. For four months hostilities continued between the two parties, in the course of which the nawaub was several times defeated, until he became so exasperated at the loss of the city of Monghyr, that he ordered the murder in cold blood of 200 prisoners. On November 6, in the same year, Patna was taken by the British; and in May, 1764, Meer Cossim's troops were totally defeated under the walls. Since that time the place has remained undisturbed in the hands of the British.

Patometer. An instrument for measuring the force of currents.

Patonce, Cross. In heraldry (Lat. *patens*, "expanding"), a cross with its terminations expanding like early vegetation or an opening blossom.

Patoo-patoo. A formidable weapon with sharp edges, used by the Polynesian Islanders and New Zealanders as a sort of battle-axe to cleave the skulls of their enemies.

Patræ (now Patras). One of the twelve cities of Achaia, was situated west of Rhium, near the opening of the Corinthian Gulf. The town was chiefly of importance as the place from which the Peloponnesians directed their attacks against the opposite coast of Ætolia. Patræ was one of the four towns which took the leading part in founding the second Achæan League. Patræ assisted the Ætolians against the Gauls in 279 B.C.

Patriarchal Cross. A cross which, like the patriarchal crossier, has its upright part crossed by two horizontal bars, the upper shorter than the lower. A cross patriarchal fimbriated or was a badge of the Knights Templar.

Patrick, St., Order of. A national order of knighthood for Ireland, established by George III. on February 6, 1788, and enlarged in 1838. As originally constituted, it consisted of the sovereign, the grand master (who was always the lord-lieutenant of Ireland for the time being), and 15 knights. By the statutes of 1838 the number of knights was increased to 22. The collar of the order (of gold) is composed of roses alternating with harps, tied together with a knot of gold, the roses being enameled alternately white within red, and red within white, and in the centre is an imperial crown surmounting a harp of gold, from which the badge is suspended. The *badge* or *jewel* is of gold, and oval; surrounding it is a wreath of shamrock proper on a gold field; within this is a band of sky-blue enamel charged with the motto of the order, *Quis Separabit MDCCLXXXIII.* in gold letters; and within this band a saltire gules (the cross of St. Patrick) surmounted by a shamrock or trefoil slipped vert, having on each of its leaves an imperial crown or. The field of the cross is either argent or pierced, and left open. A sky-blue ribbon, worn over the right shoulder, sustains the badge when the collar is not worn. The *star*, worn on

the left side, differs from the badge only in being circular in place of oval, and in substituting for the exterior wreath of shamrocks eight rays of silver, four rays of which are larger than the other four. The *mantle* is of rich sky-blue tabinet, lined with white silk, and fastened by a cordon of blue silk and gold with tassels. On the right shoulder is the *hood*, of the same materials as the *mantle*. The order is indicated by the initials K.P.

Patriot. A sincere and unbiased friend to his country; an advocate for general civilization, uniting in his conduct through life, moral rectitude with political integrity. Such a character is seldom found in any country; but the specious appearance of it is to be seen everywhere, most especially in Europe. It is difficult to say how far the term can be used in a military sense, although it is not uncommon to read of a citizen soldier, and a *patriot* soldier. Individually considered the term may be just, but it is hardly to be understood collectively.

Patrol. To go the rounds in a camp or garrison; to march about and observe what passes as a guard. To pass round as a sentinel; as, to patrol the city.

Patrolling. Performing the duties of a patrol.

Patrols. A patrol is a detachment which is employed to obtain information respecting the enemy's movements and position, and relating to the nature of the country over which the army has to move, and to keep open the communications between the different portions of a command. Patrols are generally composed entirely of cavalry, although they are sometimes composed of infantry and cavalry; and in very much broken and obstructed ground, it might be necessary that they contain only infantry.

Patte (Fr.). A term used in mining; when a well or excavation is made in loose or crumbling earth, and it becomes necessary to frame it in, the rafters must be laid horizontally to support the boards in proportion as the workmen gain depth. The ends of the rafters that are first laid run 10 or 12 inches beyond the border of the well, for the purpose of sustaining the platform. These supports are called *oreilles*; consequently, that every frame may be supported the second is attached or made firm to the first by means of the ends of boards which are nailed together. In this manner the third is joined to the second, and the fourth to the third. These ends are called *pattes*, or handles.

Pattee, Cross, or Cross Formé (Lat. *patulus*, "spreading"). In heraldry, a cross with its arms expanding towards the ends, and flat at their outer edges.

Patte d'Oie (Fr.). A term used in mining to describe three small branches which are run out at the extremity of a gallery. They are so called from their resemblance to the foot of a goose.

Pattern Regiment. A phrase of distinc-

tion which is applied to a corps of officers and soldiers who are remarkable for their observance of good order and discipline.

Paulus Hook. A point on the Jersey shore which ran into the Hudson River near where the Pavonia ferries now are. The first settlement was made here in 1688. A British fort erected at this point was taken on the morning of August 19, 1779, by the Americans under Maj. Harry Lee, who made a descent on it by way of the Point of Rocks, and captured 179 prisoners, a number of guns, and a quantity of stores.

Pavade. Formerly a short dagger was so called in Scotland.

Pavecheur, or Pavesier. An ancient militia who carried the (*pavois*) shield.

Pavia (anc. Ticinum). A city of Northern Italy, capital of the province of the same name, on the left bank of the Ticino, 20 miles south of Milan, and 8 miles above the confluence of the Ticino and the Po. Pavia was founded by the Ligurii; it was sacked by Brennus and by Hannibal; burned by the Huns; conquered by the Romans, and became a place of considerable importance at the end of the Roman empire. Then it came into the possession of the Goths and Lombards, and the kings of the latter made it the capital of the kingdom of Italy. It became independent in the 12th century, then, weakened by civil wars, it was conquered by Matthew Visconti in 1345. Since that period, its history is merged in that of the conquerors of Lombardy. Here, in 1525, the French were defeated by the Imperialists, and their king taken prisoner; but in 1527, and again in the following year it was taken and laid waste by the French. It was stormed and pillaged by Napoleon in 1796, and came into the possession of Austria by the peace of 1814. Since 1859 it has been included within the reorganized kingdom of Italy.

Pavilion. A tent raised on posts; a flag, colors, ensign, or banner; in heraldry, a covering in form of a tent, investing the armories of kings.

Pavilion, To. To furnish or cover with tents; to shelter with a tent.

Pavise (written also *Pavais*, *Pavese*, and *Pavesse*). A large shield covering the whole body, having an inward curve, managed by a pavisor, who with it screened an archer.

Pavisor. In military antiquity, a soldier who managed a pavise.

Pavon. An ancient military flag shaped like a right-angled triangle.

Pawnees. A warlike tribe of Indians who formerly resided in Nebraska, but are now located in Indian Territory. Their numbers have been greatly reduced, owing to their wars with the Sioux, with whom they maintained a hereditary warfare. They now number about 2000 souls, and are divided in four bands.

Pay. Is the stipend or salary allowed for each individual serving in the army.

Pay Bills. In the British service, accounts regularly tendered by captains of troops or companies of the money required by them for the effectives of such troop or company.

Pay, Colonial. In the British service is a certain allowance which is made to troops serving in the colonies.

Pay Department. Is that department of a government which takes charge of all matters relating to the pay of the army. In the U. S. army the pay department consists of 1 paymaster-general, with the rank, pay, and emoluments of a brigadier-general; 2 assistant paymaster-generals, with the rank, pay, and emoluments of colonels of cavalry; 2 deputy paymaster-generals, with the rank, pay, and emoluments of lieutenant-colonels of cavalry; and 50 paymasters, with the rank, pay, and emoluments of majors of cavalry.

Pay, Half. See **HALF-PAY**.

Pay, Full. See **FULL PAY**.

Pay, Staff. Is the pay and allowances which are made to officers serving on the staff of an army, or in any particular division or department.

Paymaster-General. In the U. S. army, is the chief officer of the pay department, with the rank of brigadier-general. Under the direction of the Secretary of War, the paymaster-general assigns paymasters to districts; he receives from the treasurer all the moneys which are intrusted to him for the purpose of paying the pay, the arrears of pay, etc., appertaining to the army. He is also charged with all necessary instructions to his subordinates in reference to the supply and distribution of funds for the payment of the army, and all other things appertaining to the financial duties of his department and the accountability of its officers. In these and all other matters having relation especially to the internal administration of the pay department, the correspondence and orders is direct between the paymaster-general and his subordinates, and between the department and district chiefs and their subordinates.

Paymasters. Are officers appointed in the army for the purpose of keeping its pay accounts, and the disbursing of moneys in payment of troops. In the U. S. service it is the duty of paymasters to pay all the regular and other troops; and to insure punctuality and responsibility, correct reports shall be made to the paymaster-general once in two months, showing the disposition of the funds previously transmitted, with accurate estimates for the next payment of such regiment, garrison, or department, as may be assigned to each. In the British service a paymaster is attached to each regiment.

Paymaster-Sergeant. In the English army, a non-commissioned officer who assists the paymaster.

Pay-roll. A roll or list of persons entitled to payment, with the sums which are to be paid on them. In the U. S. army, com-

manders of companies are required to prepare at each regular muster, beside one muster-roll, three copies of the "muster- and pay-roll," two for the paymaster, and one to be retained in the company files. When the paymaster's rolls have been computed and returned to the company for examination and signature, the calculations thereon will be transcribed on the triplicate muster- and pay-roll, under the direction of or by the company commander, who is responsible for the correct performance of this duty.

Pay-Sergeant. In the British service, a sergeant who, on the responsibility of the captain of a troop, battery, or company, keeps the men's accounts. He is generally, but not invariably, the color-sergeant in the infantry, or the troop or battery sergeant-major in the cavalry or artillery.

Pea Ridge. A range of hills in Benton Co., Ark., which gives its name to the battle fought here March 6-8, 1862, between the Union forces under Gen. Curtis and the Confederates under Van Dorn, in which the latter were defeated with loss of over 2500 killed, wounded, and captured.

Peabody-Martini Rifle. A breech-loading rifle invented by an American—Peabody—and improved by a Swiss. It is called *Martini-Henry* in England, in which country it is the official arm. More than half a million of these rifles were manufactured for the Turkish government during the late Russo-Turkish war by the Providence Tool Company of Rhode Island. The gun has a great reputation on account of its long range.

Peace. Freedom from war, exemption from, or cessation of, hostilities. This condition of affairs is effected and maintained by treaties between independent powers.

Peace Establishment. The reduced number of effective men in the army during a period of peace.

Peal. A long sound, or a succession of long sounds, as of cannon, etc.

Pean (Old Fr. *pannes*, "furs"). One of the furs borne in heraldry, differing from ermine only in the tinctures,—the ground being sable and the spots of gold.

Pea-rifle. A rifle of small bore carrying a ball of the size of a pea.

Peasants' War. In German history, the name given to that great insurrection of the peasantry which broke out in the beginning of the year 1525. The oppression of the peasants had gradually increased in severity, as the nobility became more extravagant and the clergy more sensual and degenerate. The example of Switzerland encouraged the hope of success, and from 1476 to 1517 there were risings here and there among the peasants of the south of Germany. A peasant rebellion, called from its cognizance, the *Bundschuh* (laced shoe), took place in the Rhine countries in 1502, and another called the "League of Poor Conrad," in Würtemberg, in 1514, both of which were put down without any abatement of the grievances

which occasioned them. The Reformation, by the mental awakening which it produced, and the diffusion of sentiments favorable to freedom, must be reckoned among the causes of the great insurrection itself. The Anabaptists, and in particular Münzer, encouraged and excited them, and a peasant insurrection took place in the Hegau in 1522. Another known as the "Latin War" arose in 1523 in Salzburg, against an unpopular archbishop, but these were quickly suppressed. On January 1, 1525, the peasantry of the abbacy of Kempten, along with the towns-people, suddenly assailed and plundered the convent; this event proved the signal for a general rising of the peasantry on all sides throughout the south of Germany. They organized themselves into bands of from 9000 to 30,000, and destroyed convents and castles, murdered, pillaged, and were guilty of the greatest excesses, which must indeed be regarded as partly in revenge for the cruelties practiced against them. In May and June, 1525, they sustained a number of severe defeats from the regular forces under Truchsess von Waldburg, in which large bodies of them were destroyed. The landgraf Philip of Hesse was also successful against them in the north of Germany. The peasants after they had been subjugated were everywhere treated with terrible cruelty; a great body of them were massacred; multitudes were hanged in the streets, and many were put to death with the greatest tortures. It is supposed that more than 150,000 persons lost their lives in this war. The lot of the defeated insurgents became harder than ever.

Pebble Powder. See GUNPOWDER.

Pecq, Le. A village of France, on the right bank of the Seine, about half a mile east from St. Germain en Laye. The allied forces crossed the Seine at this spot in 1815.

Pectoral (Fr. *pectorale*). A breastplate. Among the Romans the poorer soldiers, who were rated under 1000 drachmas, instead of the *lorica*, or brigantine (a leathern coat of mail) wore a pectoral, or breastplate of thin brass, about twelve fingers square. Some modern troops, such as the cuirassiers, etc., wear pectorals for the direct purposes of defense and bodily protection; but in general small ornamental plates with clasps have been substituted.

Peculation. A term used in a military sense for embezzling public moneys, stores, arms, or ammunition. See APPENDIX, ARTICLES OF WAR, 60.

Pedro. An early gun of large caliber for throwing stone balls.

Peel. To strip; to plunder; to pillage; as, to peel a province or conquered people.

Peel. A small tower or fort.

Peel-house. A small fortified place.

Peel-towers. The name given to the towers erected on the Scottish borders for defense. They are square, with turrets at the angles, and the door is sometimes at a height from the ground. The lower story

is usually vaulted, and forms a stable for horses, cattle, etc.

Peep o' Day Boys. Were insurgents in Ireland, who visited the houses of their antagonists at break of day, in search of arms. They first appeared July 4, 1784, and for a long period were the terror of the country.

Pegu. A British province of Eastern India, is bounded on the north by the Burmese empire, east by the Tenaasserim provinces, south by the Gulf of Martaban, and west by the Bay of Bengal and the province of Arracan. It was discovered by the Portuguese in 1520. The early history of Pegu consists of little more than a narrative of barbarous and cruel contests between that country and the kingdom of Ava, in which the latter was finally successful, and reduced Pegu to a province of that kingdom, or, as it is generally called, the Burman empire. Pegu, the capital, was taken by Maj. Cotton, with 800 men, in June, 1852, without loss; and afterwards abandoned. It was again occupied by the Burmese and strongly fortified, with a garrison of 4000 men. It was recaptured by Gen. Godwin with 1200 men and 2 guns, in two hours, with the loss of 6 killed and 82 wounded. The province was annexed to the British possessions, by proclamation, December 20, 1862, and has since prospered. In February, 1862, it was united with Arracan and Tenaasserim as British Burmah.

Pei-ho. A river of China, which rising on the confines of Tartary, traverses the northern part of the province of Chih-le or Pe-chih-le, and falls into the Gulf of Pe-chih-le, in about 38° 30' N. lat. The attack on the escort of the British and French ambassadors whilst ascending the Pei-ho to Peking (June, 1860), led to the war with China of 1860, in which year the Taku forts on this river were taken by the British.

Peishwa. The title of the military governor of the Mahrattas, whose office became hereditary in the family of Balajee Bishwanath, its first possessor, who fixed his residence at Poonah.

Peking, or Pekin. The capital of the Chinese empire, situated between the Pei-ho and Hoen-ho, 100 miles northwest from the mouth of the Pei-ho River. About 5 miles north from the city the famous Yuen-ming-yuen palaces are situated, which were sacked and destroyed by the allies in October, 1860; these were 80 in number. Here had been heaped up for centuries all the movable riches and presents of the emperors of China. At the approach of the allies Hien-fung fled in haste; and when Lord Elgin learned that it was in those grounds that the British and French prisoners, captured by treachery, had been tortured, he gave the order to sack and destroy this favorite residence of the emperor's, as it could not fail to be a blow to his pride as well as his feelings; and it became a solemn act of retribution. Peking has thus been rendered memorable by this

march of the British and French forces (1860) to the walls of the city, on which the British and French flags were raised. The provisions of the treaty of Tien-tsin (1858) were subsequently ratified and supplemented by the convention of Peking, which was signed in the English and French languages at Peking, October 24, 1860.

Pelican. An ancient name for a 6-pounder culverin, 9 feet long and weighing 2400 pounds.

Pelican. In heraldry, the pelican is drawn with her wings endorsed, and wounding her breast with her beak. When represented in her nest feeding her young with her blood, she is called a pelican in *her piety*.

Peligni. A brave and warlike people of Sabine origin, in Central Italy, bounded southeast by the Marsi, north by the Marrucini, south by Samium and the Frentani, and east by the Frentani likewise. They offered a brave resistance to the Romans, but concluded a peace with the republic along with their neighbors the Marsi, Marrucini, and Frentani, in 804 B.C. They took an active part in the Social war (90, 89). They were subdued by Pompeius Strabo, after which time they are rarely mentioned.

Pelinna, or more commonly **Pelinnæum** (now *Gardhiki*). A town of Thessaly, in Hestiasotis, on the left bank of the Peneus, was taken by the Romans in their war with Antiochus.

Pellene. A city in Achaia, bordering on Sicyonia, the most easterly of the twelve Achaean cities, was situated on a hill 60 stadia from the sea, and was strongly fortified. Its port-town was Aristonautæ. In the Peloponnesian war Pellene sided with Sparta. In the later wars of Greece between the Achaean and Ætolian leagues, the town was several times taken by the contending parties.

Pellet. An old word for shot or bullet.

Pellet, or Ogress. In English heraldry, a roundle sable.

Pell-mell. In utter confusion; with disorderly mixture; with confused violence; as, the battle was a confused heap, the ground unequal, men, horses, chariots, crowded pell-mell.

Peloponnesian War. One of the most celebrated and important of the wars carried on between the different states of Greece; the particulars of which are related in the writings of Xenophon and Thucydides. It existed for twenty-seven years, during which time the Athenians and the inhabitants of the Peloponnesus, the most southern peninsula of Greece, were the principal belligerents. After the Athenians had sustained immense losses, it was at last agreed that to establish the peace the fortifications of the Athenian harbors should be demolished, and all their ships, except twelve, be surrendered to the enemy. They were to resign every pretension to their dominions abroad; to follow the Spartans in war, and in time of peace to frame their constitutions according

to the will and prescription of their Peloponnesian conquerors. Their walls and fortifications were instantly leveled to the ground; and the conquerors observed that in the demolition of Athens, succeeding ages would fix the era of Grecian freedom. This memorable event happened about 404 years before the Christian era; and thirty "tyrants" were appointed by Lysander over the government of the city.

Pelta. A small light shield, sometimes attributed to the Amazons, but used by numerous nations of antiquity, such as the inhabitants of Thrace, Spain, and Mauritania, before its general introduction among the Greeks. It consisted mainly of a frame of wood or wicker-work covered with skin or leather, without the metallic rim, and of a great variety of shapes. It was sometimes round, as in the special case of the *cetra*, sometimes elliptical, sometimes variously situated round the rim, sometimes even quadrangular, but most commonly crescent-shaped or lunated, as alluded to in the "*Amazonidum lunatis agmina peltis*" of Virgil. Soldiers bearing the *pelta* were called *peltastæ*.

Pelusium. The Greek name of an ancient Egyptian city situated on the north-eastern angle of the Delta, and important as the key of Egypt on the Asiatic side. Pelusium is called *Sin* in the Old Testament. It first figures in semi-authentic history as the scene of Sennacherib's defeat, when (according to the Egyptian tradition, as reported by Herodotus) the camp of the Assyrians was invaded at night by a host of field-mice, who gnawed their bow-strings and shield-straps, so that in the morning, when the Egyptians fell upon them, they were defenseless. In 526 B.C., Cambyzes overthrew, near Pelusium, the forces of Pharaoh-Psammethichus. It surrendered to Alexander in 333 B.C. The city was also taken by the Persians in 309 B.C.; and in 173 B.C., it was the scene of the defeat of Ptolemy Philometor by Antiochus Epiphanes. Mark Antony captured it 55 B.C., and it opened its gates to Octavian after his victory at Actium, 31 B.C. It was taken after a protracted resistance by Amrou, the Saracen, in 618.

Pembroke. A seaport town of South Wales, on a navigable creek of Milford Haven, 210 miles west of London. In 1648 its castle was beleaguered by Cromwell, and taken after a siege of six weeks.

Penalba, or Penalva. A village of Spain, province of Huesca, 18 miles northwest of Mequinenza. During the War of the Succession the troops of Philip V. were here defeated in a bloody battle by the army of the Archduke Charles, August 15, 1710.

Penalty. In a military sense, signifies forfeiture for non-performance, likewise punishment for embezzlement, etc.

Pencil. A small flag or streamer which was formerly carried at the top of a lance;—called also *pennoncel*.

Pend d'Oreilles, or Kalispels (*Calispels*). A tribe of partially civilized Indians, divided into several bands aggregating about 2000, who reside in Washington, Idaho, and Montana Territories. A few of this tribe are also to be found in British Columbia.

Pendant. In heraldry, a part hanging from the label, resembling the drops in the Doric frieze.

Pendulum, Ballistic. See BALLISTIC PENDULUM.

Pendulum Hausse. See HAUSSE, PENDULUM.

Penetrating. Having the power of entering or piercing another body.

Penetration of Spherical Projectiles. Their penetration when of the same size, with different velocities or charges, is nearly as the squares of the velocities; when of different sizes the penetration will be proportionate to their diameters multiplied by the density, and inversely as the tenacity of the medium. The depth of penetration of a projectile fired from field-pieces at the distance of 500 or 600 yards, is from 4½ to 6 feet in parapets recently constructed, and will traverse walls of ordinary construction; but a 12-pounder is necessary to make a breach in walls of good masonry and of 4 feet in thickness, and in this case the position of the battery must be favorable, and the operation a slow one. The depth of penetration of projectiles fired from the 4½-inch siege-gun, is about the same as that of projectiles fired from the 80-pounder Parrott gun, namely, 12 feet. Sand, sandy earth mixed with gravel, small stones, chalk, and tufa, resist shot better than the productive earths. Shells may be considered as round shot of a lower specific gravity, and their penetrations are therefore proportionally less. A bank of earth, to afford a secure cover from heavy guns, will require a thickness from 18 to 24 feet. In guns below 18-pounders, if the number of the feet in thickness of the ank be made equal to the number of pounds in the weight of the shot by which it is to be assailed, the requisite protection will be obtained. Earth possesses advantages over every other material. It is easily obtained, regains its position after displacement, and the injury done to an earthen battery by day can be readily repaired at night. Where masonry is liable to be breached, it should be covered with earth. Wrought-iron plates 4½ inches in thickness will withstand the effects of 82-pound shots, and of all inferior calibers at short ranges, as 400 yards. Plates of this thickness, however, are soon destroyed by 68-pound shots, and afford little protection from the elongated shots of the new rifled ordnance. To resist successfully the fall of heavy shells, buildings must be covered with arches of good masonry, not less than 8 feet thick, having bearings not greater than 25 feet, and these must be again protected by a covering of several feet of earth. Iron plates half an inch thick, oak planks 4 inches thick, or a 9-inch brick wall, are

proof against musketry or canister at a range of 100 yards. Iron plates 1 inch thick, oak from 8 to 10 inches thick, a good wall a foot thick or a firm bank of earth 4 feet thick, will afford secure cover from grape-shot, from any but the largest guns at short ranges. The common musket will drive its bullet about a foot and a half into well-rammed earth, or it will penetrate from 6 to 10 half-inch elm boards placed at intervals of an inch. The penetration of the rifled musket is about twice that of the common musket. A rope matting or mantlet $8\frac{1}{2}$ inches thick is found to resist small-arm projectiles at all distances; it may therefore be employed as a screen against riflemen.

Peninsular War. A war which had for its theatre the kingdoms of Spain and Portugal, and in which England, Spain, and Portugal fought against France. It lasted from March, 1808, until May, 1814, when the former powers were completely victorious.

Pennetière, or Panetière (Fr.). A pocket or small bag in which slingers carried stones and leaden balls.

Pennon (Fr.). Formerly a copper wing of a long, light arrow (*vireton*), substituted for a feather.

Pennon. In former times was something like a banner, but with the addition of a triangular point, charged with arms, and borne before knights-bachelors.

Pennsylvania. One of the Middle States of the Atlantic slope, the second in population in the Union, and one of the thirteen of the original confederacy. The earliest settlements were made in 1627 by a colony of Swedes and Finns, who established themselves on the Delaware River, going as far northward as the locality of Philadelphia. In 1665 a Dutch expedition from New Amsterdam took formal possession of the country. The Dutch in their turn were superseded by the English after the capture of New York in 1664; and in 1681 the territory was granted by Charles II. to William Penn, who with his co-religionists of the Society of Friends established a Christian government "founded on peace, reason, and right." Having purchased the lands of the Indians, and conciliated them by kindness and good will, he secured their friendship during seventy years. Previous to the French and Indian war in 1755, the contests waged between the French and English colonists had not reached Pennsylvania; but in that year occurred the disastrous defeat of Braddock, near Pittsburgh, in which Washington, then a young man, distinguished himself. Pennsylvania took an active part in the Revolutionary contest, and on her soil occurred the battles of Brandywine and Germantown, September and October, 1777, the massacres of Wyoming and Paoli, and the suffering winter encampment at Valley Forge in 1777-78. The most prosperous of the colonies, and in a central position, it became the seat of the congress held by the colonies both

before and after the decision of the struggle. Independence was proclaimed here, and it remained the seat of the general government until 1800. No State in the confederacy has been more loyal to the Constitution. During the war of 1812 she promptly furnished her quota of troops, and during the civil war she sent nearly 400,000 men into the field. During this trying period her territory was three times invaded: in 1862, when Chambersburg (which see) was captured, and in 1864, when it was burned; and in 1863, when it was invaded by Lee, and the battle of Gettysburg fought on its soil.

Penobscots. A tribe of Indians, of Algonkin stock (numbering about 500), who reside on an island in the Penobscot River, about 8 miles north of Bangor, Me. They were allies of the colonists in the war of the Revolution, and received for their services a large tract of land, the greater part of which has been from time to time disposed of.

Penon de Velez. A fortified town, built on a high and steep rock, lying off the north coast of Morocco, 75 miles southeast from Ceuta. It belongs to Spain, and was founded by Pedro of Navarre in 1508. It was taken by the Moors in 1522; but recovered by the Spaniards in 1664.

Penrith. A town of England, county of Cumberland, 282 miles north-northwest of London. On a knoll to the west of the town stand the ruins of a castle, which was built by the Nevilles during the wars of the Roses, and dismantled in the civil war by the Parliamentary party. The town is a place of considerable antiquity, and it formerly played a conspicuous part in the border warfare. It was taken by the Scots several times in the 14th century, and in 1715 and 1745 was occupied by the insurgents.

Pensacola. City and capital of Escambia Co., Fla., situated on the west shore of Pensacola Bay, about 10 miles from the Gulf of Mexico, has an excellent harbor, and is one of the safest in the Gulf. Pensacola was settled by the Spaniards, occupied by the British in 1814, and acquired by the United States in 1821. It contains a navy-yard, and is defended by Forts Pickens and McKae. During the civil war, 1861-65, it was the scene of several military and naval operations. The navy-yard was surrendered to the Confederates in 1861, but was recovered by the Union forces in the following year.

Pension. Specifically, a stated allowance to a person in consideration of past services; payment made to one retired from service, for age, disability, or other cause; especially a yearly stipend paid by government to retired officers, disabled soldiers, the families of soldiers killed, etc.

Pensioner. In the British army, is a soldier maintained in Chelsea Hospital.

Pensioner, Out-. In the British army, is a soldier receiving a pension, but not maintained in Chelsea Hospital. Those who are capable of bearing arms are available for military service when required.

Pensioners, Gentlemen. See GENTLEMEN-AT-ARMS.

Penstock. A machine composed of timber, which, by means of a movable board, enables the defenders of a fortress to allow such a rush of water from the batardeaux as to inundate and destroy the works which the enemy may have constructed in the ditch.

Pentagon. In fortification, a figure bounded by five sides, which form so many angles, capable of being fortified with an equal number of bastions. It also denotes a fort with five bastions.

Pentathlon. The five exercises performed in the Grecian games, namely, leaping, running, quiting, darting, and wrestling.

Penthouse. A shed hanging forward in a sloping direction from the main wall of a place.

Pentland Hills. A range of hills in Scotland, commencing about 4 miles west from Edinburgh. Here the Scotch Presbyterians, since called Cameronians, who had risen against the government, on account of the establishment of Episcopacy, were defeated by the royal troops, November 28, 1666.

Pentri. One of the most important of the tribes in Samnium; were conquered by the Romans along with the other Samnites, and were the only one of the Samnite tribes who remained faithful to the Romans when the rest of the nation revolted to Hannibal in the second Punic war.

Peons. East Indian municipal foot-soldiers. These men are chiefly employed to assist in collecting the revenues, and carry a pike or staff. Most persons in India keep servants, who wear a belt with their master's name on it. These are called *peadahs*.

Peoria Indians. A tribe of aborigines who formerly resided in Illinois, but are now settled on the Quapaw agency, in Indian Territory, in confederation with the Kaskaskias and other tribes. They are but few in number, the northern tribes having nearly exterminated them in 1769, in revenge for the murder of Pontiac.

Pequots, or Pequods. A tribe of Indians of Algonkin stock, closely allied to the Mohegans, who resided in Eastern Connecticut. The tribe was nearly exterminated by the colonists in the Pequot war (1687).

Perclose, or Demi-Garter. In heraldry, the lower half of a garter with the buckle.

Percussion. Is the impression which a body makes in falling or striking against another, or the shock of two moving bodies. It is either direct or oblique.

Percussion, Centre of. That point wherein the shock of the percutient bodies is the greatest.

Percussion, Direct. Is where the impulse is given in the direction of a right line perpendicular to the point of contact.

Percussion, Oblique. Is where the impulse is given in the direction of a line oblique to the point of contact.

Percussion-bullet. A bullet made by placing a small quantity of percussion powder in a copper envelope in the point of an ordinary rifled-musket bullet.

Percussion-caps. See CAPS, PERCUSSION-.

Percussion-fuze. See FUZE.

Percussion-lock. A lock of a gun in which gunpowder is exploded by fire obtained from the percussion of fulminating powder.

Percussion-match. A match which ignites by percussion.

Percussion-powder. Powder composed of such materials as to ignite by slight percussion; fulminating powder.

Percutient. That which strikes or has power to strike.

Perdu. A word adopted from the French, signifying to lie flat and closely in wait. It likewise means employed on desperate purposes; accustomed to desperate enterprises.

Pered (Hungary). Here the Hungarians under Görgey were defeated by Wohlgemuth and the Russians, June 21, 1849.

Perekop. An isthmus 5 miles broad, connecting the Crimea with the mainland. It was called by the Tartars Orkapon, "gate of the Isthmus," which the Russians changed to its present name, which signifies a barren ditch. The Tartar fortress of the same name, which was situated on this isthmus, was taken and destroyed by the Russian marshal Münich in 1786, by assault, although it was defended by 1000 Janissaries and 100,000 Tartars. It was again strongly fortified by the khan, but was again taken by the Russians in 1771, who have since retained it.

Peremptory. Whatever is absolute and final, not to be altered, renewed, or restrained. *Peremptory execution*, what takes place immediately.

Perfidious. Treacherous; false to trust; guilty of violated faith; hence a perfidious foe. War, however melancholy in its effects, and frequently unjustifiable in its cause and progress, is nevertheless, among civilized nations, so far governed by certain principles of honor as to render the observance of established laws and customs an object of general acquiescence. When two or more countries are engaged in a hostile contest, whatever belligerent party grossly deviates from those rules is deservedly stamped with infamy, and justly called a *perfidious foe*.

Perfidy. Want of faith; treachery.

Perforated Cake Powder. See GUNPOWDER.

Périgueux. A town of France, capital of the department of Dordogne, 296 miles south-southwest from Paris. Périgueux occupies the site of the ancient *Vesunna*, which was at the time of the Roman invasion the capital of the *Petrocorii*. Under the empire, it was a place of no small importance, as it stood at the junction of five roads, and was strongly fortified. It was

ceded, along with Aquitaine, to the English by Louis IX. After having been recovered by the French, the town was again lost; but it was finally taken from the English by Charles V. During the civil wars of the Reformation, it was a stronghold of the Protestants till the year 1581; and it was not till 1653 that it came into the power of the crown.

Peril. Instant or impending danger; risk; hazard; jeopardy; exposure to injury, loss, or destruction.

Peril. To expose to danger; to hazard; to risk, etc.

Perim. A small island belonging to Great Britain, situated in the strait of Bab-el-Mandeb, at the entrance to the Red Sea, about 1 mile distant from the Arabian, and about 13 miles from the African coast. On its southwest side is an excellent harbor, capable of accommodating 40 men-of-war. Fortifications have been erected on the island, and the guns command the strait on both sides. It was first occupied by the English in 1799, and held by them as a check upon the designs of the French, who were then in Egypt. It was abandoned in 1801, but was reoccupied by Great Britain in February, 1857, with a view to the protection of her Indian possessions, which were thought to be exposed to some chance of danger from the opening of the Suez Canal.

Perjury. False swearing; the act or crime of willfully making a false oath, when lawfully administered; or the crime committed when a lawful oath is administered, in some judicial proceeding, to a person who swears willfully, absolutely, and falsely in a matter material to the issue. For punishment of persons convicted of perjury, see APPENDIX, ARTICLES OF WAR, 60 and 62.

Perkernucka. Petty officers are so called in India.

Perm. A government of Russia, situated partly in Russia in Europe and partly in Russia in Asia. It was invaded and ruined by the Mongols in the 13th century.

Permanent Fortification. See FORTIFICATION.

Permanent Rank. A rank in the military service which does not cease with any particular service, or locality of circumstances; in opposition to local or temporary rank.

Péronne. A town of France, in the department of Somme, 30 miles east of Amiens. Louis XI. of France, having placed himself in the power of the Duke of Burgundy, was forced to sign the treaty of Péronne, confirming those of Arras and Conflans, with several humiliating stipulations, October 14, 1468. Louis XI. had promised Champagne and Brié as appanages to his brother Charles, duke of Berry, not intending to keep his word, apprehending that those provinces, being so near Burgundy, would prove a fresh source of broils and disputes. Péronne was a place of much importance in the Middle

Ages, and bore the name of *La Pucelle* ("The Maiden City"), as it was never captured till Wellington took it eight days after the battle of Waterloo.

Perpendicular Direction. In the march of a line, is the direction at right angles to the line which each man should take in a direct movement to the front. Without the strictest attention is paid to this essential principle in all movements, the greatest irregularity, and ultimately the greatest confusion, must ensue. Perpendicular and parallel movements constitute, indeed, the whole system of good marching. When several columns, divisions, or companies advance, the lines and directions of marching must be strictly perpendicular and parallel to each other, otherwise the distance will be lost, and the ultimate object of forming a correct line must be defeated.

Perpendicular Fortification. Owes its origin to the Marquis de Montalembert, a distinguished French general, who published his works upon the subject in 1776. Vauban had, it was admitted, rendered the art of attack superior to that of defense. Montalembert strove to reverse this relation, and in his endeavors, rejected entirely the bastion system of the older engineers. Instead of the occasional bastions, with intervening curtains, with which they surrounded their *enceinte*, he broke the whole polygon into salient and re-entering angles, the latter being generally at right angles. Before the connected redans thus formed were counterguards of low elevation and ravelins, to which the approaches were through casemated *caponnieres*. In the salient angle of each redan he built a brick tower, 40 feet in diameter, twelve-sided, and four stories high. The second and third tiers were built for heavy guns, and the upper loop-holed for musketry. In the centre of the tower was a circular *reduit*, intended as a last refuge for the garrison. Montalembert maintained that from these towers every possible approach could be commanded, which to a great extent is true; but it must be also remembered that the greater space a gun commands, by so much the more is it raised above the plain, and rendered visible. These towers would have little chance against the rifled ordnance of the present day. Montalembert's system was violently attacked by the French engineers, but Carnot subsequently adopted it, with some modifications, and it enters largely into the modern German defensive works. The system has never, however, found favor with British engineers.

Perpendicular, Gunner's. See GUNNER'S LEVEL.

Perpignan. A town of France, in the department of the Eastern Pyrenees, situated on the Tet, 35 miles from Narbonne. It commands the passage by the Eastern Pyrenees from Spain into France, and is defended on the south by a citadel and by ramparts flanked with bastions, and protected by raised works. Perpignan now ranks as one

of the first strongholds in France. In 1474 the town was taken by Louis XI. of France, but having been restored to Spain, it was again taken by Louis XIII. in 1642, and, along with the province of Roussillon, finally ceded to France by the treaty of the Pyrenees in 1659. In 1793 a battle was fought in its neighborhood between the Spaniards and the French, in which the former were defeated.

Perrhæbi. A powerful and warlike Pelasgis people, who, according to Strabo, migrated from Eubœa to the mainland, and settled in the districts of Hestiosos and Pelasgiotis in Thessaly. The Perrhæbi were members of the Amphictyonic League. At an early period they were subdued by the Lapithæ; at the time of the Peloponnesian war they were subject to the Thessalians, and subsequently to Philip of Macedon; but at the time of the Roman wars in Greece they appear independent of Macedonia.

Perrières. A kind of short mortars formerly much used for throwing stone shot.

Persepolis. An ancient city, the capital of Persia at the time of the invasion of Alexander the Great, and the seat of the chief palaces of the Persian kings. The city is said to have been burned by Alexander, and is not subsequently mentioned in history except in the second book of the Maccabees, where it is stated that Antiochus Epiphanes made a fruitless effort to plunder its temples. In the later times of the Mohammedan rule, the fortress of *Istakhr* seems to have occupied the place of Persepolis.

Persia (Per. Iran). A country of Asia, which may be considered as the most opulent and powerful of any that lie to the west of India; it is bounded on the west by Turkey in Asia, north by Caucasus, the Caspian Sea, and Asiatic Russia, east by Afghanistan and Beloochistan, and south by the Persian Gulf and Arabian Sea. The Persians, as a nation, first rose into notice on the ruins of the great empires founded on the Euphrates. Babylon was taken by Cyrus in 688 B.C., and soon after he extended it more widely than any that had been previously established in the world. It comprised, on one side, the west of India, and on the other, Asia Minor, Syria, and Egypt; and the valor, indeed, with which the Greeks defended their small territory, alone prevented him from annexing a considerable part of Europe to his domains. After a feeble struggle, it succumbed to the brave and disciplined armies of Alexander, who won the entire empire of Darius Codomanus for his own by force of arms, in 331. After his death, his immense possessions were divided among his generals; but Greeks and Greek sovereigns continued during several centuries to reign over Western Asia. About 2 B.C. Artaxerxes founded the monarchy of the Parthians; and in 8 A.D. the dynasty of the Sassanids arose, who restored the name, with the religion and laws, of ancient Persia. They were overthrown by

the Mohammedan invaders, who suffered in their turn from the successive invasions of the country by the descendants of Genghis Khan, Tamerlane, and the Turks, who entirely changed the aspect of Western Asia. At length, in 1501, a native dynasty again arose, under Ismael Shah, who placed himself on the throne. After the reign of Abbas the Great, who died in 1628, the princes of the Safi dynasty became enervated by luxury and dissipation, and Persia, in the beginning of the last century, was overrun by the Afghans, who carried fire and sword throughout the whole country, and reduced its proudest capitals to ashes. The atrocities of the Afghans were avenged, and the independence of Persia vindicated, by Nadir Shah; but though the victories of this daring chief threw a lustre on his country, it was almost torn to pieces after his death by civil war, till the fortune of arms gave a decided superiority to Kerim Khan. His death gave rise to another disputed succession, with civil wars as furious as before. At length Aga-Mohammed, a eunuch, raised himself in 1795 by crimes and daring to the sovereignty, and not only held it during his lifetime, but transmitted it to his nephew, who assumed the title of Feth Ali Shah, and subdued the rebellious tribes in Khorassan, but was dragged into a war with Russia, in which he lost the power of Derbend and several districts on the Kur. In 1848, Nasr-ed-Din, the great-grandson of Feth Ali, succeeded to the throne, and in consequence of the capture of Herat by the Persians in 1856, war was declared against them by Great Britain. Bushire was occupied, and the Persian troops were twice defeated by Gen. Outram at Kooshab and Mohammerah in the following year. These victories were followed by the conclusion of a treaty of peace, April, 1857, and the evacuation of Herat by the Persians in the month of July.

Personnel (Fr.). All the officers and men, military and civil, composing an army, or any part of one, as opposed to *matériel*.

Personnel of a Battery. All officers and men necessary for the manœuvre, management, and care of a battery.

Perspective. Is the art of drawing the resemblance of objects on a plane surface, as the objects themselves appear to the eye, etc.

Perth. The principal town of Perthshire, and formerly the metropolis of Scotland, situated on the Tay, which is crossed here by a fine stone bridge, 33 miles from Edinburgh. It is one of the most ancient towns of Scotland. It is a generally received opinion that Perth was built and fortified by Agricola, who erected a citadel to maintain his conquests, and check the wild spirit of the savage natives. In 1298, after the battle of Falkirk, Edward I. fortified Perth and rebuilt the walls in the strongest manner. The worthy burghesses of this town seem to have been men of mettle in those days, and on various occasions sallying forth from behind

their walls, set fire to the castles of their haughty neighbors, when the latter had forbidden their vassals to carry provisions to the city. In the year 1311, Robert Bruce laid siege to the town, but was obliged to withdraw his troops, after various unsuccessful attempts to take it; but subsequently, choosing a dark night, he led a selected band of determined men against it, scaled the walls, and carried the town sword in hand, the king himself being the second man who entered the place. About the beginning of the 14th century, the famous combat between the Clan Chattan and the Clan Quhele, or Clan Kay, took place on the North Inch, and was decided in favor of the former, partly by the bravery of a citizen or burgess called Harry Wind, whom the chief of the Clan Chattan had engaged on the spot to supply the place of one of his men who had failed to appear. In 1544, the regent, at the instigation of Cardinal Bethune, turned Lord Ruthven, provost of the town, out of his office, and conferred it upon Chartres of Kinfauns. The citizens, however, resisted the attempt, and repulsed, in a smart skirmish, the cardinal's nominee, who came to enter upon his duties at the head of an armed force. In 1559, after a riotous insurrection, during which the Catholic churches were demolished, the queen determined to inflict the severest vengeance on the Reformers. Both parties took the field; negotiations ensued; Perth was thrown open to the queen, and occupied by a French garrison. Relief from the insolence and exactions of the garrison was only obtained after a regular siege by the Reformers. On June 26, Lord Ruthven attacked the town on the west, and Provost Halyburton of Dundee fired into it from the bridge, and speedily obliged the garrison to capitulate. Subsequently, Argyle, and Stewart, prior of St. Andrews, marched out of Perth with 800 citizens, resolved to prosecute the Reformation, or perish in the attempt. The people joined them everywhere as they proceeded, and before they reached Stirling their numbers had increased to 5000. The gates of Stirling and every other town in their way were thrown open to receive them. They, without violence, took possession of Edinburgh, cast the images out of its churches, and placed in them ministers of the Reformation.

Peru. A republic of South America, formed out of the former Spanish viceroyalty of the same name. The first information received of the country by the Spaniards was obtained from a young cacique in the neighborhood of the Isthmus of Darien about the year 1511. In 1518, Vasco Nuñez de Balboa crossed the mountains which separated the two oceans, and took possession of the Pacific in the name of the king of Castile. He extended his discoveries many leagues southward, but appears not to have reached the territory of Peru. In 1525, Francisco Pizarro, a soldier of mean birth

but of daring spirit, who had accompanied Balboa in the previous expedition, embarking at Panama with about 100 men, landed in Peru, and spent three years in exploring the country. Having returned to Spain with presents of gold and jewels for the king, he was sent out with orders to effect the conquest of the newly-discovered country. Recrossing the ocean with 180 men and 27 horses, he again set sail from Panama, and receiving some further reinforcements at Puerto Viejo and Puna, now considered himself in a fit position to enter upon the proper scene of his labors. He accordingly crossed over to Tumbes, and there learned that the country had for some time been distracted by a civil war between Huascar and Atahualpa, two sons of the late inca. Pizarro saw at once the importance to him and his cause of this state of the country. After some time spent in reconnoitring, he fixed upon a fertile spot in the rich valley of Tangarala as a site for a settlement. Here he established a town which he called San Miguel. On September 24, 1532, leaving 50 men as a guard for this new settlement, he started out with 167 men, 67 of whom were cavalry, to meet the inca Atahualpa, who now victorious over his brother was encamped with his army about ten or twelve days' journey off. His force was everywhere received with kindness; an envoy from the inca was sent with presents to meet and invite him to an interview at Caxamarca. The Spaniards arrived here November 15, 1532, and treacherously prepared to use the unsuspecting kindness of the Peruvians as the means of their destruction. When at the appointed time the inca accompanied by his nobles and retinue was proceeding to the place of interview, he and his followers were assailed by the Spaniards who were concealed in the neighboring buildings, thousands of the unsuspecting and unarmed natives were slain, and Atahualpa himself taken prisoner. An immense ransom was offered for him; it was accepted by Pizarro, who, however, basely refused to give up his prisoner, but after a mockery of a trial put him to death. For many years the country was in a state of war and anarchy, resulting finally in Pizarro becoming master of Peru in 1546, and it became a viceroyalty of Spain. In its subsequent history there is matter of little interest till the war of independence, which was proclaimed in 1821 by Gen. San Martin, and successfully terminated by Bolivar, who, after a succession of engagements, the most notable of which was that of Ayacucho (which see), finally drove the Spaniards from Callao, their last stronghold, July 29, 1826. The country has since on several occasions been the scene of those insurrections to which the states of Spanish America have been subject. In 1879 war was proclaimed between Peru and Chili, which has recently terminated in a complete victory for the latter.

Perugia (anc. *Perusia*). A city of Central Italy, 10 miles east of the lake of the same name, and 85 north of Rome. It formed in ancient times one of the twelve Etrurian republics. In conjunction with other cities of Etruria, it long resisted the power of the Romans, but was finally ruined by the latter, having been defeated in two engagements, 809 and 295 B.C., and becoming subject to Rome in 294. It is memorable in the civil wars as the refuge of L. Antonius, the brother of the triumvir, when unable to oppose the progress of Octavianus. It was held by the latter for some months and was compelled to surrender through famine, and burned to the ground in 40 B.C. It was afterwards rebuilt by Augustus, and was captured by the Goths under Totila at the fall of the Western empire. It was afterwards united to the Papal States, and in 1860 became part of the kingdom of Italy.

Perugia, Lake of. See **TRASIMENUS LAKE**.

Perusia. See **PERUGIA**.

Pescara. A town of Italy, province of Chieti. It was formerly strongly fortified, and has stood many sieges.

Peschiera. A frontier town and fortress of Italy, in Lombardy, at the south extremity of the Lake of Garda, 20 miles north-northwest from Mantua. Peschiera commands the right bank of the river Mincio. During the French republican war, it was a simple pentagon. Its fortifications, however, have been greatly strengthened by the Austrians. It is defended by walls and by forts, lunettes, fosses, and a covered way; and the purpose which it is mainly intended to serve, besides that of forming an intrenched camp capable of accommodating a considerable number of troops, is to harass an army attempting to cross the Mincio by Goito or Valeggio. It has been taken frequently by siege, by the French in 1796; by the Austrians and Russians, 1799; by the French again, 1801; given up by them, 1814; taken by the Sardinian troops under Charles Albert, May 30, 1848; retaken by Radetzky, 1849. It was invested by the Sardinians in June, 1859, after the battle of Solferino. The conclusion of the treaty of Villafranca, however (July 11, 1859), relieved Peschiera from a siege, and it was included in the kingdom of Italy by treaty of Vienna, 1866.

Peshawur. A city of British India, capital of the province of Peshawur (or Peshawar), about 18 miles east of the eastern extremity of the Khyber Pass. It was founded by the Mogul emperor Akbar. Runjeet Singh took it after his victory over the Afghans at Noushera, and destroyed many of its finest buildings.

Pesth. A city of Hungary, situated on the Danube, opposite to Buda, with which it is connected by a bridge of boats three-quarters of a mile in length. It was repeatedly taken and besieged in the wars of Hungary, particularly in the long contests with the Turks. The great insurrection

broke out here September 28, 1848. Buda-Pesth was taken by the Imperialists, January 5, 1849. The Hungarians afterwards defeated the Austrians, who were obliged to evacuate it April 18, 1849; but the latter, under Gen. Hentzi, occupied Buda, and a severe contest began between the two parties. On May 4, Görgei, with an army of 40,000 Hungarians, occupied the heights above Buda, and began to bombard that town; while the Austrians in their turn directed their artillery against the lower city of Pesth. On May 16, the Hungarians made an unsuccessful attack on Buda, but on the 20th the place was taken by assault, after an obstinate and bloody struggle.

Pestle. An instrument used in the fabrication of gunpowder.

Petards. Are instruments used for blowing open gates, demolishing palisades, etc. They consist of a half-cone of thick iron, filled with powder and ball; they are usually fastened to a plank, and the latter is provided with hooks to allow of its being attached securely to a gate, etc. The petard has been almost universally superseded by the use of powder-bags.

Petardeer, or Petardier. One who manages petards.

Petelia, or Petilia (now *Strongoli*). An ancient Greek town on the eastern coast of Bruttium; founded, according to tradition, by Philoctetes. It was situated north of Croton, to whose territory it originally belonged, but it was afterward conquered by the Lucanians. It remained faithful to the Romans when the other cities of Bruttium revolted to Hannibal, and it was not till after a long and desperate resistance that it was taken by one of Hannibal's generals.

Peterero, or Pedrero. A short piece of chambered ordnance was formerly so called.

Petersburg. A city of Dinwiddie Co., Va., on the south bank of the Appomattox River, about 25 miles from Richmond. The city is one of historic interest. It was twice occupied by the British forces as headquarters during the Revolutionary war; but it is principally noted as the scene of several sanguinary encounters during the civil war, and for the obstinate and bloody defense which it made. On June 15-16, 1864, two formidable assaults were made on it by the Army of the Potomac under Gen. Grant, but they were repulsed with heavy loss. It was then determined to invest the city, which was done a few days later. On July 30, another attempt was made to take it by storm, but without success. The siege was prolonged with many indecisive operations until April 3, 1865, after a week's bombardment it was evacuated by Gen. Lee, who surrendered six days later.

Petersburg, St. The capital and most populous city of the Russian empire, at the mouth of the Neva in the Gulf of Finland, 16 miles east of Cronstadt, and 400 miles northwest of Moscow. It was founded by Peter the Great, May 27, 1703. The peace

of St. Petersburg, between Russia and Prussia, the former restoring all her conquests to the latter, was signed May 5, 1762. Treaty of St. Petersburg for the partition of Poland, August 5, 1772. Treaty of St. Petersburg, let to a coalition against France, September 8, 1806. Treaty of Alliance, signed at St. Petersburg, between Bernadotte, prince royal of Sweden, and the emperor Alexander; the former agreeing to join in the campaign against France, in return for which Sweden was to receive Norway, March 24, 1812.

Peterwalden (Germany), Convention of. Between Great Britain and Russia, by which a firm and decisive alliance between these powers was made against France and the course of action against Napoleon Bonaparte was planned, signed July 8, 1813. This alliance led to the overthrow of Bonaparte in the next year.

Peterwardein, or **Varadin**. The capital town of Slavonia, Austria, and the strongest fortress on the Danube, is situated on a scarped rock, on the right bank of the Danube, opposite Neusatz, with which town it is connected by a bridge of boats, defended by a strong *tête-de-pont*, 44 miles northwest of Belgrade. It is the residence of the general commandant of the Slavonian military frontier, and of several subordinate military authorities. It derives its present name from Peter the Hermit, who here marshaled the soldiers of the first Crusade. Peterwardein was taken by the Turks, July, 1526. In 1683, the fortifications were blown up by the Imperialists, and the town was soon after burned to the ground by the Turks; but at the peace of Passarowitz, on July 21, 1718, it remained in the possession of the emperor. It was here that, on August 5, 1716, the Austrians, under Prince Eugene, obtained a great victory over the Turks under Grand Vizer Ali; the latter then lost their last footing in Central Europe.

Petra. The *Sela* of the Old Testament, the chief town of Arabia Petræa, once the capital of the Idumeans, and subsequently of the Nabatæi. It was subdued by A. Cornelius Palma, a lieutenant of Trajan's, and remained under the dominion of the Romans a considerable time, and its destruction is supposed at length to have been wrought by the Mohammedans.

Petra. An ancient town of Colchis, in the land of the Lazi, founded by Joannes Tzibus, a general of Justinian, to keep these people in subjection. It was situated on a rock near the coast, and was very strongly fortified. It was taken by Chosroes in 541 A.D., and its subsequent siege by the Romans is described by Gibbon as one of the most remarkable actions of the age. The first siege was relieved; but it was again attacked by the Romans, and was at length taken by assault, after a long protracted resistance, in 551 A.D. It was then destroyed by the Romans, and from that time disappears from history.

Petra. An ancient and strong fortress in Sogdiana, held by Arimazes when Alexander attacked it.

Petronel (Fr. *petrinal*, or *poitrinal*). A piece between a carbine and a pistol (with a wheel-lock), which was used by the French during the reign of Francis I.; it was held against the breast when fired. To prevent any injury from its recoil, the soldier who used it was provided with a pad.

Petropaulovski. A fortified town on the east coast of Kamtschatka, was attacked by an English and French squadron August 30, 1854. They destroyed the batteries, and a party of 700 sailors and marines landed to assault the place, but fell into an ambuscade, and many were killed. After this the Russians greatly strengthened their defenses, but on May 30, 1855, the allied squadron in the Pacific arriving here found the place deserted. The fortifications were destroyed, but the town was spared.

Pettah. In Southern India, a term applied to the *enceinte* of a town, as distinguished from the fortress by which it is protected.

Pettman Fuze. See **FUZE**.

Pfaffendorf and Liegnitz. See **LIEGNITZ**.

Pfetersheim. A town of Germany, in Hesse-Darmstadt, 4 miles northwest from Worms. A battle was fought here, in 1555, which brought the "Peasants' war" to a termination.

Phalanx. The ancient Greek formation for heavy infantry, which won for itself a reputation of invincibility. It may be described as a line of parallel columns, rendered by its depth and solidity capable of penetrating any line of troops. The oldest phalanx was the Lacedæmonian, or Spartan, in which the soldiers stood 8 deep, but this was reduced to 4 men by Miltiades, in order to increase his front at the battle of Marathon, 480 B.C. The Macedonian phalanx, as the latest form that organization assumed, and as the shape in which the phalanx encountered the military skill of the West, is deserving of description. The line was 16 deep: a grand-phalanx comprising 16,384 men, composed of four phalanxes or divisions, each under a general officer, called a *phalangarch*; his command was divided into two brigades, or *merarchies*, each of these comprising two regiments, or *chiliarches*, of four battalions, or *syntagma*, each, and each syntagma of 16 men each way, making a perfect square. The Roman legion was far superior to the phalanx.

Phalsbourg. A strong town of Alsace, department of La Meurthe, Northeast France. It was ceded to France in 1661, and its fortress erected by Vauban, 1679. It checked the progress of the victorious allies both in 1814 and 1815, and withstood the Germans from August 16 to December 12, 1870, when it capitulated unconditionally.

Pharax. One of the council of ten appointed by the Spartans in 418 B.C. to control Agis. At the battle of Mantinea in

that year, he restrained the Lacedæmonians from pressing too much on the defeated enemy, and so running the risk of driving them to despair. In 396 B.C. he laid siege with 120 ships to Caunus, where Conon was stationed, but was compelled to withdraw by the approach of a large force.

Pharsalus (now *Fersala*, or *Pharsalia*). Anciently a town of Thessaly, to the south of Larissa, on the river Enipeus, a branch of the Peneus (now the Salambria), and historically notable mainly for the great battle fought here between Cæsar and Pompey, August 9, 48 B.C. Pompey had about 45,000 legionaries, 7000 cavalry, and a great number of light-armed auxiliaries. Cæsar had 22,000 legionaries and 1000 German and Gallic cavalry. The battle-cry of Cæsar's army was "*Venus victrix*," that of Pompey's "*Hercules invictus*." Cæsar's right wing began the battle by an attack on the left wing of Pompey, which was speedily routed. Pompey fled into the camp, and his army broke up; Cæsar's troop stormed his camp about mid-day, and he himself, awaking as from stupefaction, fled to Larissa, whither Cæsar followed him next day. Cæsar lost about 1200 men. On Pompey's side about 6000 legionaries fell in battle, and more than 24,000 who had fled, were taken, whom Cæsar pardoned and distributed among his troops.

Phœon. In heraldry, the barbed iron head of a dart; used also as a royal mark, to denote crown property, and termed the *broad*, or *broad arrow*.

Philadelphia. A city and metropolis of Pennsylvania, situated between the Delaware and Schuylkill Rivers. The city was settled and planned by William Penn in 1682, and its name (City of Brotherly Love) given through the Society of Friends, of whom he was the great leader in America. It had a prominent position in the Revolution, and was in possession of the British troops after the disastrous battles of Brandywine and Germantown, until 1778. Being the second city of the United States in wealth and importance, it has been ever forward in promoting her interests.

Philibeg. See **FILLIBEG**.

Philippaugh. Near Selkirk, Southern Scotland, where the Marquis of Montrose and the royalists were defeated by David Leslie and the Scotch Covenanters, September 13, 1646.

Philippi. A city of Macedonia. It was named after Philip II. of Macedon, who conquered it from Thrace. Here Antony and Octavianus, in two battles, defeated the republican forces of Cassius and Brutus, who both committed suicide, October, 42 B.C.; this ended the republican government of Rome.

Phocæa. The most northern of the cities of Ionia, was situated about 25 miles north-west from Smyrna. It was founded by a colony of Phocians, led by two Athenians, Philogenes and Damon. Its citizens are said

to have been the first among the Greeks who extended their commercial voyages to great distances; and its inhabitants abandoned their city rather than submit to the Persians, 544 B.C. They settled in Italy, and founded Velia. Massilia in France, and Alalia in Corsica, were colonies of the Phocæans.

Phocis. A province of Greece Proper, or Hellas, bounded on the north by the Ozolian Lokri, on the north by Doris, on the east by the Opuntian Lokri, and on the south by the Gulf of Corinth. During the Peloponnesian war, the Phocians were close allies of the Athenians. In 357 B.C. they seized Delphi, and commenced the second Sacred war. They were opposed by Thebes and other states, and were utterly subdued by Philip II. of Macedon in 346.

Phœnicia. Is the name given by the Greeks and Romans to a certain territory situated about 34°-36° N. lat., bounded by the Mediterranean on the west, by Syria to the north and east, and Judæa to the south. Its length may be said to have been about 200 miles, while its breadth never exceeded 20 miles. The natives were the most eminent navigators and traders of antiquity; their cities or allied states being Tyre, Sidon, Berytus, Tripolis, Byblos, and Ptolemais, or Acra. From the 19th to the 18th century B.C., they established colonies on the shores or isles of the Mediterranean, Carthage, Hippo, Utica, Gades, Panormus, and are said to have visited the British Isles. Phœnicia was conquered by Cyrus, 537 B.C.; by Alexander, 332; by the Romans, 47; and after partaking of the fortunes of Palestine, was added to the Ottoman empire, 1516.

Phous-dan. An East Indian term for a commander of a large body of forces.

Phrygia. A country of Asia Minor. According to the division of the provinces under the Roman empire, Phrygia formed the eastern part of the province of Asia, and was bounded on the west by Mysia, Lydia, and Caria, on the south by Lycia and Pisidia, on the east by Lycæonia (which is often reckoned as a part of Phrygia) and Galatia (which formerly belonged to Phrygia), and on the north by Bithynia. The kingdom of Phrygia was conquered by Cræsus, and formed part of the Persian, Macedonian, and Syro-Grecian empires; but, under the last, the northwestern part was conquered by the Gauls; and a part west of this was subjected by the kings of Bithynia; this last portion was the object of a contest between the kings of Bithynia and Pergamus. The whole of Phrygia was assigned by the Romans to the kingdom of Pergamus, after the overthrow of Antiochus the Great in 190 B.C.

Piacenza (anc. *Placentia*). A city of Northern Italy, in the province of the same name, on the right bank of the Po, 2 miles below the confluence of the Trebbia. It is of an oblong form, surrounded by ancient walls and ditches, and defended by a citadel, which was garrisoned by the Austrians till

1869. Piacenza is first mentioned in 219 B.C., when a Roman colony was settled there. In 200 B.C. it was plundered and burned by the Gauls, but rapidly recovered its prosperity, and was long an important military station. It was the western terminus of the great Æmilian road, which began at Ariminum on the Adriatic. In later history, it plays an important part as one of the independent Lombard cities.

Pianosa. An island in the Mediterranean, about 10 miles south-southwest of Elba. Pianosa was annexed to Elba and granted to Napoleon I. after his first abdication.

Pibroch (Gael. *piobaireachd*). A wild, irregular species of music, peculiar to the Highlands of Scotland. It is performed on a bagpipe, and adapted to excite or assuage passion, and particularly to rouse a martial spirit among troops going to battle.

Picador (*Sp.*). A horseman armed with a lance, who commences the exercises of a bull-fight by attacking the animal without attempting to kill him.

Picardy. An ancient province in the north of France, was bounded on the west by the English Channel, and on the east by Champagne. The name does not occur till the 13th century. It was conquered by the English in 1346, and by the Duke of Burgundy in 1417, to whom it was ceded by the treaty of Arras, September 21, 1435, and annexed to France by Louis XI., 1463.

Picaroon. A pillager, one who plunders; one who violates the laws.

Picentia (*Picentinus*; now *Acerno*). A town in the south of Campania, at the head of the Sinus Pæstanus, and between Salernum and the frontiers of Lucania, the inhabitants of which were compelled by the Romans, in consequence of their revolt to Hannibal, to abandon their town and live in the neighboring villages. Between the town and the frontiers of Lucania, there was an ancient temple of the Argive Juno, said to have been founded by Jason, the Argonaut. The name of Picentia was not confined to the inhabitants of Picentia, but was given to the inhabitants of the whole coast of the Sinus Pæstanus, from the promontory of Minerva to the river Silarus. They were a portion of the Sabine Picentes, who were transplanted by the Romans to this part of Campania after the conquest of Picenum, 268 B.C., at which time they founded the town of Picentia.

Picentines (*Picentes*). A Sabine tribe, subdued by the Romans, and their capital, Asculum, taken, 268 B.C. They began the Social war in 90, and were conquered in 89 B.C.

Picenum. An ancient province of Italy, was bounded on the north by the Galli Senones, on the west by the Umbrians and Sabines, on the south by the Vestini, and on the east by the Adriatic Sea. The Picentes, its inhabitants, remained long in undisturbed tranquillity, while the neighboring

tribes were vainly struggling against the all-usurping ambition of Rome. That power condescended in 299 B.C. to enter into an alliance with them. Even when they were at length obliged, in 268 B.C., to bow before the resistless destinies of the Romans, they suffered little injury. It was not until the outbreak of the Social war, in 90 B.C., that the Picentes appear to have experienced the toils and calamities of a great struggle. Then they assumed an active and zealous part in the general revolt against Rome. Their capital city, Asculum, gave the signal of insurrection, by assassinating the Roman proconsul. Their armies kept the Roman general Cn. Pompeius Strabo for a long time at bay. Nor when the tide of battle began to turn against them did their courage waver. They continued to fight until 89 B.C., and were put down by sheer force.

Pichegru's Conspiracy. See **GEORGES CONSPIRACY**.

Pickeer. To pillage; to pirate. To skirmish, as soldiers on the outpost of an army, or in pillaging parties.

Picker. A small, pointed brass wire, which was formerly supplied to every infantry soldier for the purpose of cleaning the vent of his musket.

Picket. A detachment composed of cavalry or infantry, whose principal duty is to guard an army from surprise and oppose such small parties as the enemy may push forward for the purpose of reconnoitring.

Picket. A sharp stake used for securing the fascines of a battery, or fastening the tent-ropes of a camp, etc.

Picket. To fortify with pickets or pointed stakes. Also, to fasten to a picket, as a horse while grazing.

Picket, Inlying. See **INLYING PICKET**.

Picket, Outlying. Is a detachment of troops, sometimes with light guns, posted on the front and flanks of an army in the field, in order to guard against surprise, and to keep reconnoitring parties at a proper distance.

Picket-guard. A guard of horse and foot, always in readiness in case of alarm.

Picket-line. A rope to which horses are secured when groomed.

Picket-line. A position held and guarded by small bodies of men placed at intervals.

Picket-pin. An iron pin with a ring at the top. It is driven in the ground and the lariat is attached to it to secure a horse while grazing.

Pickets, Tracing. See **TRACING PICKETS**.

Picqueering, Pickering, or Pickerooning. A little flying skirmish, which marauders make when detached for pillage, or before a main battle.

Picrate. See **EXPLOSIVES**.

Picric Acid. See **EXPLOSIVES**.

Picric Powder. See **EXPLOSIVES**.

Picts (*Picti*). The ancient inhabitants of the northeast provinces of Scotland. The Pictish territory extended along the whole

sea-coast from the Firth of Forth to the Pentland Firth. It was bounded on the west by the country of the Scots, which extended along the western coast from the Firth of Clyde to the modern Ross-shire; but the precise line between the two nations cannot be ascertained. The country of the Picts was bounded on the south by the Firth of Forth and the province of Lothian, then possessed by the English; while the country of the Scots had for its southern boundaries the Firth of Clyde and the kingdom of Cumbria, held by the independent Britons. In the middle of the 7th century, a portion of the southern province of the Pictish territories was subdued by Oswy, king of Northumbria. Egfrid, Oswy's son and successor, seems to have contemplated the subjugation of the whole Pictish kingdom. He advanced northwards with his army; Brude, son of Bili, king of the Picts, retreating before him. The English sovereign passed the Tay, and the Picts made a stand at Nechtansmere, supposed to be Dunnichen, in Anchus; the English were utterly defeated, and their king slain, May 20, 685. The most active of all the Pictish sovereigns was Hungus, son of Urgust, who succeeded, in 780, and reigned for thirty years. He was in constant wars with the Scots, the Britons, and the English, in which he was generally victorious. After his death the kingdom began to decline. Between 838 and 842, the Scots under Kenneth II. totally subdued the Picts, and seized all their kingdom. Their incursions in England led to the Saxon invasion.

Picts' Wall. One of the barriers erected by the Romans across the northern part of England to restrain the incursions of the Picts (which see).

Piece. A general name for any kind of ordnance or musket.

Piece. In heraldry, an ordinary or charge; as, the fesse, the bend, the pale, the bar, the cross, the saltire, the chevron, are called honorable *pieces*.

Piece, Battering-. See **BATTERING-PIECES**.

Piece, Field-. See **FIELD-PIECE**.

Piedmont. An Italian principality, which now forms the northwest part of the kingdom of Italy. In 1796 it was seized by the French, and parceled out into six departments, five being incorporated with France, and one with the kingdom of Italy, but after the fall of Napoleon, the house of Savoy recovered possession of it. Since 1860 the name Piedmont, as a provincial designation, has been disused; and in the new division of Italy into provinces, the boundaries of Piedmont as a distinct country have been disregarded.

Piegans. A tribe of Blackfeet Indians, numbering about 2000, who reside in Montana, and were frequently at war with the Shoshones, Flat Heads, and Gros Ventres. Like the majority of nomadic tribes, they at various times make raids on the settlers, and as a natural result require the correctionary

discipline of the military forces. In 1870 they were severely punished by Col. Baker, and, owing to disease and pestilence, they will probably soon cease to exist.

Pierced. In heraldry, a term used to indicate that a charge is perforated so as to show the field beneath it. The aperture is presumed to be circular, unless some other form, as square-pierced or lozenge-pierced, be specified in the blazon.

Piercer. See **ORDNANCE, CONSTRUCTION OF, BORING AND TURNING**.

Pieria. A narrow slip of country on the southeastern coast of Macedonia, extending from the mouth of the Peneus in Thessaly to the Haliacmon, and bounded on the west by Mount Olympus and its offshoots. The inhabitants of this country, the Pieres, were a Thracian people, and are celebrated in the early history of Greek poetry and music. After the establishment of the Macedonian kingdom in Emathia in the 7th century B.C., Pieria was conquered by the Macedonians, and the inhabitants were driven out of the country.

Pierrier. Was a term originally applied to an engine for casting stones; then to a small kind of cannon; now to a mortar for discharging stones, etc.

Piers. The columns upon which a bridge is erected.

Pies (Fr.). Counts palatine who were created in 1560, by Pope Pius IV., and who had precedence at Rome over knights of the Teutonic order and order of Malta.

Pike, Pikeman. Previously to the use of the bayonet, infantry of the line—that is, the heavy-armed troops—were from the earliest times armed with pikes or spears. The Macedonians carried pikes 24 feet long; those of modern warfare averaged 12 or 14 feet. They were of stout wood, and tipped with a flat iron spear-head, which sometimes had cutting edges. As a defense against cavalry, the pike, from its length and rigidity, was of great value; but though it long survived the introduction of gunpowder, that event was really fatal to it. For success with the pike, especially in offensive war, a depth of several men was essential, and this depth rendered the fire of artillery peculiarly fatal. The pike is now superseded by the bayonet on the end of the musket.

Pikestaff. The wooden pole or handle of a pike.

Pile. A beam of wood driven into the ground to form a solid foundation for building. Also a heap, as a pile of balls. Balls are piled according to kind and caliber, under cover if practicable, in a place where there is a free circulation of air, to facilitate which the piles should be made narrow if the locality permits; the width of the bottom tier may be from twelve to fourteen balls, according to the caliber. Prepare the ground for the base of the pile by raising it above the surrounding ground so as to throw off the water; level it, ram it well, and cover it with a layer of screened sand. Make the

bottom of the pile with a tier of unserviceable balls buried about two-thirds of their diameter in the sand; this base may be made permanent; clean the base well and form the pile, putting the fuze-holes of shells downwards, in the *intervals*, and not resting on the shells below. Each pile is marked with the number of serviceable balls it contains. The base may be made of bricks, concrete, stone, or with borders and braces of iron. Grape- and canister-shot should be oiled or lackered, put in piles, or in strong boxes, on the ground-floor, or in dry cellars; each parcel marked with its kind, caliber, and number.

Pile. In heraldry, one of the lesser ordinaries, having the form of a wedge, usually placed pale-wise, with the broadest end uppermost, resembling a pile used in laying the foundations of buildings in watery places, whence it has its name.

Pile. The head of an arrow was formerly so called.

Pile Arms, To. To place three guns together in such a manner that they may stand upright steadily. Also called *stack arms*.

Pile-bridge. A bridge of which the piers are built with piles. These may be either temporary wooden structures, in which wooden piles, driven into the ground, serve also as piers, or they may be permanent bridges, with iron cylinders forming the piles below the surface, and piers above.

Piletus. A kind of arrow formerly used, having a knob upon the shaft, near the head, to prevent it from penetrating the object aimed at too deeply.

Piling Balls. See **PILE**.

Pillage. The act of plundering. Also that which is taken from another by open force, particularly and chiefly from enemies in war; plunder; spoil.

Pillage. To strip of money or goods by open violence; to plunder; to spoil; as, troops pillage the camp or towns of an enemy.

Pillnitz, or Pilnitz. A palace and ordinary summer residence of the royal family of Saxony, in a beautiful situation 7 miles southeast of Dresden. Pillnitz acquires a historic interest from the meeting of princes held in the castle in August, 1791, when the Declaration of Pillnitz was framed, according to which Austria and Prussia agreed to declare the circumstances of the king of France (then a prisoner in the Tuileries, after his ineffective flight to Varennes) to be a matter of common interest to the sovereigns of Europe, and to express the hope that common cause would be made for his restoration. The convention of Pillnitz took place between the emperor Leopold and the king of Prussia, July 20, 1791. On August 27, 1791, the treaty of Pillnitz, or as some style it, the Partition Treaty, was finally agreed upon at Pavia by the courts in concert. It was to the effect "that the emperor should retake all that Louis XIV.

had conquered in the Austrian Netherlands, and uniting these provinces to the Netherlands, give them to his serene highness the elector palatine, to be added to the palatinate; Bavaria to be added to Austrian possessions," etc.

Pillow, Fort. See **FORT PILLOW**.

Pilon (Fr.). A half-pike, 7 feet long exclusive of the iron, which was 18 inches. It consisted of a fir tube covered with parchment and varnished. Marshal Saxe proposed to draw up an army four deep, the two front ranks armed with muskets, and the two rear with pilons and muskets too.

Pilum. A missile weapon, used by the Roman soldiers, and in a charge darted upon the enemy. Each man of the legionary soldiers carried two of these pila.

Pimas, or Névomes. A tribe of aborigines, about 4000 in number, who are located on a reservation along the Gila River, in Pima and Maricopa Counties, Arizona. They are an active, athletic race, cultivate the soil and pursue a few crude industries, and are at hereditary enmity with the Apaches.

Pin. See **ORDNANCE**.

Pincers, Gunner's. See **GUNNER'S PINCERS**.

Pindarees. In the East Indies, are plunderers and marauders, who accompany a Mahratta army. The name is properly that of persons who travel with grain and merchandise; but war affording so many opportunities and creating so many necessities, the merchants, as it is all over the world, become plunderers and the worst of enemies.

Pinerolo, or Pignerol. A town of Northern Italy, province of Turin. It is surrounded by a wall of no great strength, and though originally a part of Piedmont, was in possession of France from 1681 till the peace of Utrecht in 1718. It was once very strongly fortified; but its defenses were blown up by the French in 1718.

Ping. The whistle of a shot, especially the rifle-bullets in their flight.

Pinion. To bind the hands or arms of a person so as to prevent his having the free use of them.

Pinkney (near Edinburgh). Here the English under the Earl of Hertford, protector, totally defeated the Scots, September 10, 1547. About 10,000 of the Scots were slain, and about 1500 taken prisoners. The English loss was scarcely 200.

Pintle. In artillery, is the vertical bolt around which the chassis is traversed. In the centre-pintle carriage it is the centre of the chassis, but in the front-pintle carriage it is in the centre of the front transom. It is a stout cylinder of wrought iron inserted in a block of stone, if the battery be a fixed one; or it is secured to cross-pieces of timber bolted to a platform firmly imbedded in the ground, if it be of a temporary nature. In casemate batteries the pintle is placed immediately under the throat of the embra-

sure, and the chassis is connected with it by a stout strap of iron, called the tongue.

Pintle-hole. An oval-shaped aperture made in the trail transom of a field-carriage, wider above than below, to leave room for the pintle to play in.

Pintle-hook. See **ORDNANCE, CARRIAGES FOR, NOMENCLATURE OF ARTILLERY CARRIAGE.**

Pintle-plate. Is a flat iron through which the pintle passes, and is nailed to both sides of the bolster.

Pintle-washer. An iron ring through which the pintle passes, placed close to the bolster for the trail to move upon.

Piombino. A town of Italy, province of Pisa, opposite the island of Elba. Here is a large metallurgic establishment for the manufacture of Bessemer steel and military projectiles of great hardness and perfection.

Pioneer Sergeant. In the British service, the non-commissioned officer who commands the pioneers.

Pioneers. Are soldiers sometimes detailed from the different companies of a regiment and formed under a non-commissioned officer, furnished with saws, felling axes, spades, mattocks, pickaxes, and bill-hooks. Their services are very important, and no regiment is well fitted for service without pioneers completely equipped. In European armies there are a certain number of pioneers to each regiment.

Pipe of Peace. See **CALUMET.**

Pipe-clay. A composition which soldiers use for the purpose of keeping their buff cross-belts, etc., clean.

Piquichins (Fr.). Irregular and ill-armed soldiers, of which mention is made in the history of the reign of Philip Augustus. They were attached to the infantry.

Piquier (Fr.). A pikeman, or one who is armed with a pike.

Pirmasens, or Pirmasenz. A town of Rhenish Bavaria. Here Moreau and the French were defeated by the Duke of Brunswick and the Prussians, September 14, 1793.

Pirogue. American Indian canoe, dug out, formed out of the trunk of a tree; or two canoes united. A term also applied in the United States to a narrow ferry-boat carrying two masts and a leeboard.

Pisa (anc. Pisæ). One of the oldest and most beautiful cities of Italy, and, till lately, the capital of the now extinct grand duchy of Tuscany, on the banks of the river Arno. Pisæ was one of the twelve cities of Etruria; it is frequently mentioned in the Ligurian wars as the headquarters of the Roman legions. Early in the 11th century, Pisa had risen to the rank of a powerful republic. Its troops took part in all the great events of the Holy Land; and its fleet in turn gave aid to the pope in Southern Italy, to the emperor in Northern France, chastised the Moors, and exacted its own terms from the Eastern emperors. In their wars with the Saracens of Sardinia, the Pisans had conquered Sardinia, Corsica, and the Balearic Islands, and

for a time maintained their ground against their hereditary enemies, the Genoese; but having sided with the Ghibellines in the long wars which desolated the empire, Pisa suffered severely at the hands of the victorious Guelphic party. Indeed, the rivalry of the Guelphic cities of Florence, Lucca, and Siena nearly brought Pisa to the brink of ruin at the close of the 13th century; and after struggling for more than a hundred years against external foes and the internal dissensions between the democratic mob and the Ghibelline nobles, without losing their character for indomitable valor, the Pisans finally threw themselves under the protection of Galeazzo Visconti of Milan. It became subject to Florence after a long siege, 1406-8. In 1494, Pisa became independent under the protection of Charles VIII. of France. When the French left Italy, the old struggle was renewed; and after offering a desperate resistance, the Pisans, in 1509, were compelled by hunger to surrender the city to the Florentine army besieging the walls.

Pisidia. A district of Asia Minor, originally included within Pamphylia, or Phrygia, was constituted a separate province in the division of the Roman empire under Constantine the Great. It was bounded north and west by Phrygia and Lycia, and south by Pamphylia, and east by Cilicia and Isauria. The inhabitants were a lawless and freebooting people, spurning the advance of civilization, and daring any invader to follow them into their rugged fastnesses. Rome conquered them only to find that their spirit of independence was not broken. They would not brook the establishment of a single garrison or colony. It was only their towns that paid tribute. They carried their invincible dispositions down to modern times; and under the appellation of *Karamanians* they still continue to be wild, rapacious, and suspicious of strangers.

Pistol. Is the smallest description of fire-arm, and is intended to be used with one hand only. Pistols were first used by the cavalry of England about 1544. They vary in size from the delicate saloon-pistol, often not 6 inches long, to the horse-pistol, which may measure 18 inches, and sometimes even 2 feet. They are carried in holsters at the saddle-bow, in the belt, or in the pocket. Every cavalry soldier should have pistols, for a fire-arm is often of great service for personal defense, and almost indispensable in giving an alarm or signal. Of late years pistols have been made with revolving cylinder breeches, in which are formed several chambers for receiving cartridges, and bringing them in succession into a line with the barrel ready for firing. See **REVOLVERS.**

Pistol-carbine. A horseman's pistol with a detachable gun-stock.

Pistolet. A little pistol.

Pistol-grip. A shape given to the small of the stock in shot-guns and rifles, to give a better hold for the hand.

Pistolier (*Fr.*). Soldier armed with a pistol; a good pistol shot.

Pitan Nabobs. Certain chiefs in India are so called, namely, of Cudapa, Carroul, and Savanare.

Pitans, or Patans. A tribe in the East Indies, who are supposed to be the descendants of the northern Indians, and who were early converted to Mohammedanism. They are very fierce, and have been reckoned among the best troops in India.

Pitauz (*Fr.*). This word is sometimes written *petaux*, and was formerly used to distinguish those peasants that were pressed into the service, in contradistinction to soldiers who were regularly enlisted.

Pitch. To fix firmly; to plant; to set in array; as, to pitch a tent; to pitch a camp.

Pitched Battle. A battle in which the hostile forces have firm or fixed positions, in distinction from a skirmish.

Pitched Fascines. See *Pyrotechny*.

Pitch-field. A pitched battle.

Pittsburgh. A city and port of entry of Alleghany Co., Pa. Pittsburgh was first settled in 1754, a stockade having been erected here which was occupied by the French as a trading-post, and given the name of Fort Duquesne. An English expedition against this fort under Gen. Braddock was defeated by the French and Indians, July 9, 1755. In 1758 another English expedition marched against this post, which was then regarded by the youthful Washington as the key of the West. An advanced detachment under Capt. Grant having encamped on what is still called Grant's Hill, was attacked and defeated by a party of French and Indians from Fort Duquesne. But on the approach of Gen. Forbes, with a force of 6200 men, the disheartened garrison set fire to the fort and descended the Ohio River. The victorious troops, on entering, November 25, by general acclamation called the place Pittsburgh, in honor of William Pitt, then prime minister of England. The town of Pittsburgh was incorporated as a borough in 1804, and chartered as a city in 1816.

Pivot. That officer or soldier upon whom the company wheels.

The *pivot flank* in a column is that which when wheeled up preserves the proper front of divisions of the line in their natural order. The opposite flank of the column is called the reverse flank.

Pivot-gun. A cannon which turns on a pivot in any direction.

Pivot-man. The same as pivot (which see).

Pizzo. A city of Italy, in the Neapolitan province of Calabria Ultra II., situated on the Gulf of Santa Euphemia, 6 miles north-east from Monteleone. It was at Pizzo that Murat, the ex-king of Naples, landed with a few followers, October 8, 1815, with the view of recovering his kingdom. He was immediately taken prisoner and shot in the castle of Pizzo on the 18th. In 1860 it was taken by Garibaldi.

Placage (*Fr.*). In fortification, a kind of revetment, which is made of thick plastic earth laid along the talus of such parapets as have no mason-work, and which is covered with turf.

Place. In fortification, signifies, in general terms, a fortified town, a fortress; hence we say it is a strong place.

Place Basse (*Fr.*). In fortification, the lower flanks according to certain systems are so called.

Placed, To be. This expression is frequently used in military matters, to signify the appointment or reduction of officers. Hence, *to be placed* upon full or half-pay. It is more generally applicable to the latter.

Placientia. See *PIACENZA*.

Places of Arms. This term has various significations, although it uniformly means places which are calculated for the rendezvous of men in arms, etc. When an army takes the field, every stronghold or fortress which supports its operations by affording a safe retreat to its depots, heavy artillery, magazines, hospitals, etc., is called a *place of arms*. In offensive operations, those lines are called *places of arms*, or parallels, which unite the different means of attack, secure the regular approaches, etc., and contain bodies of troops who either do duty in the trenches, protect the workmen, or are destined to make an impression upon the enemy's outworks. There are *demi-places of arms* between the *places of arms*. These are more or less numerous in proportion to the resistance made by the besieged. See *RE-ENTERING PLACES OF ARMS*.

Plain. A field of battle.

Plan. A scheme devised; a method of action or procedure expressed or described in language; a project. A plan of campaign (says Napoleon) should anticipate all that an enemy may do, and combine within itself the means necessary to baffle it. Plans of campaign are modified by circumstances, the genius of the chief, the nature of the troops, and topography. There are good and bad plans of campaign, but sometimes the good fail from misfortune or mismanagement, while the bad succeed by caprices of fortune.

Plan of a Work. A plan shows the tracing; also the horizontal lengths and breadths of the works; the thickness of the ramparts and parapets; the width of the ditches, etc. It exhibits the extent, division, and distribution of the works; but the depth of the ditches and the height of the works are not represented in a plan.

Plane of Comparison. In the plan of a fortress, and of the surrounding country, are expressed the distances of the principal points from a horizontal plane, imagined to pass through the highest or lowest points of ground, in the survey. This imaginary plane is called a *plane of comparison*.

Plane of Deflade. Is a plane supposed to pass through the summit or crest of a work, and parallel to the plane of site.

Plane of Fire. See POINTING.

Plane of Sight. See POINTING.

Plane of Site. The general level of the ground or ground line, upon which the works are constructed, is called the *plane of site*, whether that plane be horizontal or oblique to the horizon.

Plane Table. A surveying instrument, consisting of a table or board and arrangements for leveling and traversing it. It is much used in military surveys and in gunnery in getting the ranges of projectiles by the method of intersections.

Plant, To. In a military sense, to place; to fix; as, to plant a standard. It likewise signifies to arrange different pieces of ordnance for the purpose of doing execution against an enemy or his works; hence, to plant a battery. Some authors apply this word to the act of directing a cannon properly.

Plantagenet. The surname of a dynasty of English kings who ruled from 1154 to 1485. Henry II. was the founder, and Richard III., who was killed at Bosworth, the last of the line. They were generally warlike and ambitious rulers, being engaged in contests at home (see ROSES, WARS OF THE) and in France. The name belonged to the house of Anjou, and is said to have been derived from the circumstance of the first count of this house having caused himself to be scourged with branches of broom (*planta genista*) as a penance for some crime. The name passed to the English line of kings through the extinction of the old Norman dynasty in the male line in the person of Henry II., and the marriage of Matilda, his daughter, to Geoffrey, count of Anjou, their son succeeding to the throne.

Plassey. A village of British India, in the district of Nuddea, presidency of Bengal, on the left bank of the Hooghly, 96 miles north of Calcutta. It is memorable as the scene of the victory that laid the foundation of the British-Indian empire. On June 23, 1757, Clive, with a force of 900 Europeans and 2100 Sepoys, crossed the river to attack 68,000 men under Sooraj-oo-Dowlah, soubahdar of Bengal. After much cannonading on both sides, Meer Jaffer, who was in the interest of the British, advised the soubahdar to retreat. Clive immediately advanced, routed the army, and took the camp of the soubahdar, who was dethroned to make way for the traitor Meer Jaffer.

Plastron (Fr.). Stuffed pad or cushion, formerly worn at the shoulder to sustain the recoil of heavy muskets and other fire-arms, still used by fencers upon the right side; also a breastplate or half cuirass. In the old French service, the gens d'armes, the heavy cavalry, the light horse, etc., were obliged to wear them on all occasions, at reviews, etc.

Platea (more commonly *Plateæ*). An ancient city of Bœotia, on the northern slope of Mount Cithæron, on the frontiers of

Attica. At an early period, the Plateans deserted the Bœotian confederacy, and placed themselves under the protection of Athens; and when the Persians invaded Attica in 490 B.C., they sent 1000 men to the assistance of the Athenians, and had the honor of fighting on their side at the battle of Marathon. Ten years afterwards (480 B.C.) their city was destroyed by the Persian army under Xerxes at the instigation of the Thebans. It was the site of the battle between Mardonius, commander of the army of Xerxes of Persia, and Pausanias, commanding the Lacedæmonians and Athenians, 479 B.C.; the same day as the battle of Mycale. Of 300,000 Persians, scarce 3000 escaped with their lives. The Grecian army, about 110,000, lost but few men. The Greeks obtained immense plunder, and were henceforth delivered from the fear of Persian invasions. In the third year of the Peloponnesian war (429), the Thebans persuaded the Spartans to attack Platea, and after a siege of two years at length succeeded in obtaining possession of the place (427). Platea was then razed to the ground, but was again rebuilt after the peace of Antalcidas (387 B.C.). It was destroyed the third time by its inveterate enemies, the Thebans, in 374 B.C. It was rebuilt by Philip II. of Macedon, after his victory at Cheronea, 338 B.C.

Plate. Metallic armor composed of broad pieces, and thus distinguished from mail.

Plate. To arm with plate or metal for defense. "Why plated in habiliments of war?"

Plate-armor. Armor of strong metal plates for protecting fortifications and the like; also mail consisting entirely of metallic plates, formerly worn to protect the person.

Platform. Is a strong flooring upon which a piece of ordnance, mounted on its carriage, is manœuvred when in battery. Its object is to facilitate the service of heavy guns and mortars, and to insure accuracy of fire. Fixed platforms are used for casemate and barbette batteries in fortifications, and are constructed with the works; siege-platforms for guns and howitzers; and siege-platforms for mortars; the other kinds are the rail-platform, the ricochet-platform, and the platforms for sea-coast mortars. Platforms should possess strength and portability, and the pieces composing them should be constructed of the same dimensions, viz.: 9 feet long, 5 inches wide, and 8½ inches thick. The weight of each piece in a platform is about 60 pounds; and in a siege-platform for guns and howitzers, there are 49 pieces, 1 being used as a *hurter* on the front part of the platform to prevent the carriage from running too far forward, and 12 for sleepers. The weight of this platform complete is 2601½ pounds. This platform is laid with an elevation to the rear, of 1½ inches to the yard, or 4½ inches in the whole length. This elevation is given to diminish the recoil of the piece and to permit the water to

run off. The length of this platform is 15 feet by 9 feet. The platform for a siege-mortar is composed of only 6 sleepers and 21 deck-planks. It is laid level, and the front and rear deck-planks are connected by eye-bolts to every sleeper. This platform is about 9 feet deep by 9 feet wide, and weighs 1220 pounds. The rail-platform for siege-mortars consists of 8 sleepers and 2 rails for the cheeks of the mortar-bed to slide on, instead of the deck-plank, and is very strong, and easily constructed and laid. For method of laying platforms for siege-gun or howitzer, and for mortars, see "Hand-book of Artillery," by Roberts, pages 143-47.

Platform Wagon. A sort of wagon used for transporting heavy ordnance.

Platoon. Probably from the French *peloton*, a "ball of thread," a "knot," was a term formerly used in the English service to designate a body of men who fired together. In U. S. tactics, it is now a recognized subdivision of a company, being one-half.

Plattsburg. A township and capital of Clinton Co., N. Y., situated on both banks of the Saranac River, at its entrance into Lake Champlain. In the bay was fought the naval battle of Champlain, in which the British flotilla, under Commodore Downie, was defeated by the American commodore McDonough, September 11, 1814; while the land forces amounting to 14,000 men, under Sir George Prevost, were defeated by Gen. Macomb.

Play. Is occasionally applied to a military action; as, the guns played upon the enemy.

Plea. That which is alleged by a party in support of his cause; in a stricter sense, an allegation of fact in a cause, as distinguished from a demurrer; in a still more limited sense, and in modern practice, the defendant's answer to the plaintiff's declaration and demand. That which the plaintiff alleges in his declaration is answered and repelled or justified by the defendant's *plea*.

Plevna. A town of Bulgaria, which became important in a military sense through the battles which took place around it during the Russo-Turkish war. The first battle took place July 15-16, 1877, resulting in the capture of Nikopolis. The second took place July 30, with considerable loss to both sides, but without any decisive results. The third took place September 11.

Plombée (Fr.). An ancient war-club, whose head was loaded with lead.

Plongée. In artillery and fortification, means a slope toward the front. Thus, in speaking of the course of a shell through the air, its *plongée* is from the point of greatest altitude to the point at which it strikes the earth. So, in fortification, the *plongée* is the top of the parapet, sloping gently toward the front. This depression varies from one-fourth to one-sixth of the thickness of the parapet.

Ploy. To form a column from a line of battle on some designated subdivision.

Ployments. A general term for all tactical movements by which a column is formed from line upon a designated subdivision.

Pluck. Spirit; perseverance under opposition or discouragement; indomitableness; courage.

Plume. A large and handsome feather worn as an ornament on a helmet, on a military hat, and the like.

Plummets. In gunnery, is a simple line and bob for pointing mortars. A plummet is also used for regulating the march of infantry. It is made by means of a musket-ball, suspended by a silk string, upon which the required lengths are marked; the length is measured from the point of suspension to the centre of the ball. The different lengths of these plummets are as follows: for common time, 90 steps in a minute, 17.87 inches; quick time, 110 steps in a minute, 11.6 inches; double time, 165 steps in a minute, 5.17 inches.

Plunder. To take the goods of another by force; to take from by robbery; to spoil; to strip; to rob; as, to plunder a place. Also to take by pillage or open force; as, the enemy plundered all the goods they found.

Plunder. That which is taken from an enemy; pillage; spoil.

Plunging Fire. See FIRE, PLUNGING.

Pluteus. A kind of wicker helmet covered with raw ox-hide, worn by the ancient Greeks when engaged in sapping walls. Others were made of hurdles, covered in the same way, running upon three wheels, and affording cover to 7 or 8 miners.

Plymouth. A seaport town in England, county of Devon, on the east side of a peninsula, between the rivers Plym and Tamar, at the head of Plymouth Sound, 87 miles southwest of Exeter. Prior to the time of the Norman conquest it was called *South Town*, or *Sutton*; under the Saxon dynasty it was called *Tamertoeorth*. The growing prosperity of the town excited the jealousy of France; and in 1389 a force from thence landed, and attempted to burn it. They succeeded in burning a portion, but were ultimately repulsed, with the loss of 500 men, by Hugh Courtenay, earl of Devon, aided by a number of "knights and men of the country." A similar attempt was made in 1377, but with no great result; and after each, the fortifications were extended and strengthened. In 1385 the Black Prince embarked from Plymouth for France, and on his return to England he landed here with his prisoner, King John of France, who had been captured at the famous battle of Poitiers. During the civil war between Charles I. and the Parliament, Plymouth was held by the troops of the latter party, who, though besieged, and almost reduced by famine, resisted for three years every effort of the royalists. After the restoration the citadel was erected, and in the reign of William III. the dock-yard and the naval arsenal were established toward the west, upon the eastern shore of Hamoaze.

Plymouth. A town of Washington Co., N. C., on the south bank of Roanoke River about 8 miles from its mouth, where it empties into Albemarle Sound. During the civil war it was held for some time by the Union troops as a key to the river, and was strongly fortified. On April 17, 1864, a Confederate force under Gen. Hoke attacked this place, and after four days' severe fighting, being five times repulsed with great slaughter, succeeded in capturing it, by the powerful assistance of an ironclad ram and a floating sharpshooter battery.

Pocket Ledger. In the British service, is a small book in the possession of each soldier, containing the result of the monthly settlement of pay, the state of his savings-bank account, the date of his enlistment, his services, wounds, decorations, date of birth, next of kin, a summary of the regulations which affect him, and many other useful particulars.

Podoll (Bohemia). The site of a severe conflict between the Austrians and a part of the army of Prince Frederick Charles of Prussia, June 26, 1866, in which the latter had the advantage.

Point. In heraldry, a triangular figure issuing from the dexter and sinister base of the shield. It is common in French and German heraldry, and occurs in the shield of Hanover, which was a part of the royal arms of Great Britain from the accession of George I. till that of the present sovereign. A shield charged with a point is in heraldic drawing hardly distinguishable from one parted per chevron.

Point d'Appui. Any particular given point or body, upon which troops are formed, or by which they are marched, in line or column. *Points d'appui* also signify the different advantageous posts, such as castles, fortified villages, etc., which the general of an army takes possession of in order to secure his natural position.

Point of Alignment. The point which troops form upon and dress by.

Point of Formation. A point taken, upon which troops are formed in military order.

Perpendicular points, the points upon which troops march in a straight-forward direction.

Relative points, the points by which the parallelism of a march is preserved.

Point of Honor. See HONOR, POINT OF.

Point of War. A loud and impressive beat of the drum, the perfect execution of which requires great skill and activity. The point of war is beat when a battalion charges.

Point-blank. The second point at which the line of sight intersects the trajectory of a projectile. See POINTING.

Point-blank. Directed in a line toward the object aimed at; aimed directly toward the mark.

Point-blank Range. Is the distance from the muzzle of the piece to that point in a

projectile's trajectory where it cuts the prolongation of the natural line of sight, a second time, the natural line of sight being horizontal. The British define point-blank range as, "the distance from the muzzle to the first graze when the axis of the piece is parallel to the horizontal plane upon which the carriage stands." This definition is being adopted in the U. S. service. See POINTING.

Point-blank Shot. The shot of a gun pointed directly toward the object to be hit.

Pointing. To point or aim a fire-arm is, to give it such direction and elevation that the projectile shall strike the object.

Definitions.—The *axis of the piece* is the centre line of the bore.

The *line of fire* is the axis of the piece prolonged.

The *plane of fire* is a vertical plane through the line of fire.

The *line of sight* is the right line from the eye to the object to be hit, passing through the front and rear sights.

The *plane of sight* is a vertical plane through the line of sight.

The *angle of sight*, or the *elevation*, is the vertical angle included between the line of sight and the plane containing the axis of the piece and a horizontal line at right angles to it.

The *natural line of sight* is the line of sight nearest to the axis of the piece. In guns without rear sights it is the right line through the highest point of the base-ring and swell of the muzzle or top of the front sight when there is one. It is sometimes called the *line of metal*, as in mortars. For convenience and accuracy the *natural line of sight* is usually parallel to the axis of the piece. When special breech-sights are used, it passes through the zero of the scale, which in the *pendulum hausse* and other vibrating scales coincides with the axis of vibration. All other lines of sight are called *artificial lines of sight*.

Point-blank, in small-arms, is the second point in which the natural line of sight (when horizontal) cuts the trajectory. In artillery, it is the point where the projectile first strikes the horizontal plane on which the gun stands, the axis of the piece being horizontal.

Pointing Guns and Howitzers.—In pointing old model guns and howitzers under ordinary angles of elevation, the piece is first directed toward the object, and then elevated to suit the distance. The accuracy of the aim depends: (1) On the fact that the object is situated in the plane of sight; (2) That the projectile moves in the plane of fire, and that the planes of sight and fire coincide, or are parallel and near to each other; and (3) On the accuracy of the elevation. The first of these conditions depends on the eye of the gunner, and the accuracy and delicacy of the sights; the errors under this head are of but little prac-

tical importance. When the trunnions of the piece are horizontal, and the sights are properly placed on the surface of the piece, the planes of sight and fire will coincide; but when the axis of the trunnions is inclined, and the natural line of sight is oblique to the axis of the bore, the planes are neither parallel nor coincident, but will intersect at a short distance from the muzzle, and the aim will be incorrect. If the natural line of sight be made parallel to the line of fire, by making the height of the front sight equal to the disparity of the piece, the planes of sight and fire will be parallel. Field-guns of the present day have special breech-sights or pendulum-sights. The zero of the scale and top of front sight are in a line parallel to the axis of the piece, and in pendulum-sights this zero coincides with the pivot at which the scale vibrates. Siege and sea-coast cannon are generally fired from fixed platforms, which renders the axis of the trunnions horizontal; they are, therefore, not furnished with pendulum-sights, but usually with breech-sights set in sockets at the breech. In the absence of a breech-sight the piece can be pointed with a natural line of sight so as to strike objects not situated at point-blank distance. Owing to the shape and size of the reinforce of sea-coast cannon, the natural line of sight is formed by affixing a front sight to the muzzle, or to a projection cast on the piece between the trunnions. Although the latter arrangement does not give quite so long a distance between the sights as is desirable, it permits the use of a shorter breech-sight, and the front sight does not interfere with the roof of the embrasure, when the piece is fired under high elevation.

Errors in Pointing.—When the platform or ground upon which the gun stands is not level there is an error in pointing (except when compensating sights such as the *pendulum hausse* are used), which varies in direction with the circumstances of the pointing and in amount with the elevation of the piece.

If the *natural line of sight* is pointed upon the object and the elevation then given by a gunner's quadrant or other device, the shot will go to the side of the lower wheel. If the gun be depressed, it will go to the side of the upper wheel.

If the *tangent scale* or old pattern *breech-sight* is used with the ordinary fixed muzzle-sight, and it be placed on a chalk-mark just determined, the shot will fall on the side of the upper wheel. If the scale is placed on the permanent mark, the contrary will hold.

If a *socket* or *fixed breech-sight* is used, the shot will fall on the lower or upper side according as the gun is elevated or depressed.

Pointing Mortars.—In pointing mortars, the piece is first given the elevation, and then the direction necessary to attain the object. Mortars are generally fired from behind epaulements, which screen the object from the eye of the gunner. The elevation is first

given by a gunner's quadrant, and the direction is given by moving the mortar-bed with a handspike, so as to bring the line of metal into the plane of sight, which passes through the object and the centre of the platform. The plane of sight may be determined in several ways; the method prescribed is to plant two stakes, one on the crest of the epaulement, and the other a little in advance of the first, so that the two shall be in a line with the object, and the gunner standing in the middle of the rear edge of the platform; a cord is attached to the second stake and held so as to touch the first stake; a third stake is driven in a line with the cord, in rear of the platform, and a plummet is attached to this cord so as to fall a little in rear of the mortar. The cord and plummet determine the required plane of sight into which the line of metal of the mortar must be brought. With the 18-inch mortar mounted upon centre-pintle chassis, the plane of sight must be so determined as to pass through the pintle to obtain perfect accuracy. One of the best methods of pointing mortars so mounted, is to place on the crest of the parapet in line with the axis of the platform a goniometer, the alidade of which can be directed upon the object,—the angle is read from the vertical plane containing the axis of the platform. The transverse circle is similarly graduated from the axis of the platform. A pointer attached to the chassis enables the gunner to lay the mortar very nearly in the vertical plane passing through the object,—the error being the perpendicular distance from the pintle to the plane of sight. This is the method of Lieut. A. B. Dyer, 4th U. S. Artillery. Gen. Abbot of the U. S. Engineer Corps used a similar principle during the late war, 1861–65. The usual angle of fire of mortars is 45° , which corresponds nearly with the maximum range. The advantages of the angle of greatest range are: (1) Economy of powder; (2) Diminished recoil, and strain on the piece, bed, and platform; (3) More uniform ranges. When the distance is not great, and the object is to penetrate the roofs of magazines, buildings, etc., the force of fall may be increased by firing under an angle of 60° . The ranges obtained under an angle of 60° are about *one-tenth* less than those obtained with an angle of 45° . If the object be to produce effect by the bursting of the projectile, the penetration should be diminished by firing under an angle of 30° . When the object is not on a level with the piece, the angle of greatest range is considered in practice to be 45° increased or diminished by one-half the angle of elevation or depression of the object. The angle of fire being fixed at 45° for objects on the same level with the piece, the range is varied by varying the charge of powder. Stone-mortars are pointed in the same manner as common mortars; the angle of fire for stones is from 60° to 72° , in order that they may have great force in falling; the angle for grenades

is about 88° , in order that their bursting effect may not be destroyed by their penetration into the earth.

Night-firing.—Cannon are pointed at night by means of certain marks, or measurements, on the carriage and platform, which are accurately determined during the day.

Pointing Small-arms.—The rear-sights of small-arms are graduated with elevation marks for certain distances, generally every hundred yards; in aiming with these as with all other arms, it is first necessary to know the distance of the object. This being known and the slider being placed opposite the mark corresponding to this distance, the bottom of the rear-sight notch, and the top of the front-sight, are brought into a line joining the object and the eye of the marksman. The term *coarse-sight* is used when a considerable portion of the front-sight is seen above the bottom of the rear-sight notch; and the term *fine-sight*, when but a small portion of it is seen. The graduation marks being determined for a fine-sight, the effect of a coarse-sight is to increase the true range of the projectile.

Graduation of Rear-sights.—If the form of the trajectory be known, the rear-sight of a fire-arm can be graduated by calculation; the more accurate and reliable method, however, is by trial.

Distance of Objects.—Various instruments have been devised to determine the distance of objects, based on the measurement of the visual angles subtended by a foot or cavalry soldier, of mean height, at different distances, and upon other principles. (See *RANGE-FINDER*.) The range being known, the proper elevation (or charge of powder in mortars) and length of fuze is given by tables of fire obtained from calculation or experiment. The ranges for guns of position are determined by thorough surveys of the surrounding country or harbor channels, by which the distances of all prominent points in the route of an approaching enemy are fixed beforehand. The ranges in field artillery are usually obtained by trial shots at the enemy. For small-arm and field-gun firing, the importance of at once getting the range cannot be overvalued; hence the importance of *estimating distances* without instrumental aid. The soldier is guided by his experience of aerial perspective, by the apparent size of known objects, and numerous other aids too delicate for enunciation. The art can be acquired to a high degree of perfection by *practice*, which now forms a very important part of the soldier's training.

Pointing-board. See *BOARD, POINTING*.

Pointing-cord. Cord used in pointing mortars (which see). See *POINTING-STAKES*.

Pointing-rings. See *ORDNANCE*.

Pointing-stakes. Are used in pointing mortars, and by them one of the fixed points is established upon the crest of the parapet or at the foot of the interior slope, and another in rear of the piece. Then by a cord called the *pointing-cord*, stretched between

these two points, with the plummet suspended from it, a vertical plane is determined with which the line of metal is made to coincide. Mortars are also pointed by means of *pointing-wires*.

Pointing-wires. Are wires which are used in directing mortars. The two fixed points required in directing a mortar are determined by planting two wires upon the epaulement, one upon its crest, and the other about a yard in advance of it, both as nearly as possible in the vertical plane passing through the centre of the platform and the object. The points being thus established, the direction is thus given to the mortar, by causing a plummet held in rear of it to cover the wires and the line of metal. This method is defective both in accuracy of aim and the liability of the wires being deranged by the shots of the enemy or by other causes.

Points of Passing. The ground on which one or more bodies of armed men march by a reviewing general.

Points of the Escutcheon. In heraldry, in order to facilitate the description of a coat of arms, it is the practice to suppose the shield to be divided into nine points, which are known by the following names: The dexter chief point, the middle chief, the sinister chief, the collar, or honor point, the fess point, the nombril, or navel point, the dexter base point, the middle base point, and the sinister base point. The dexter and sinister sides of the shield are so called, not in relation to the eye of the spectator, but from the right and left sides of the supposed bearer of the shield.

Poitiers, or Poitiers. A town of France, capital of the department of Vienne, on the Clain, 58 miles south-southwest of Tours. In the vicinity of Poitiers, Alaric II., the Visigoth, was defeated and slain by Clovis in 507. Somewhere between Poitiers and Tours a great battle took place on October 10, 732, between the Franks under Charles Martel and the Saracens under Abderrahman. The Saracens were routed with enormous slaughter,—357,000 of them (according to one old chronicler, and supposed to be exaggerated) being left dead on the field. Near here was fought the battle between Edward the Black Prince and John, king of France, September 19, 1356, in which Edward, with some 12,000 or 14,000 Englishmen and Gascons, defeated 60,000 of the troops of King John, and took the monarch himself and one of his sons prisoners. See *TOURS*.

Poitou. A former province of Western France, now mainly comprised in the departments of Deux Sèvres, Vendée, and Vienne. It became an English possession in 1152. In 1204, Philip Augustus regained it by conquest from England, and in 1295 it was formally ceded to France. It again reverted to England in 1360 by the peace of Bretigny, but was retaken by Charles V., and incorporated with the French crown.

Poitrel (Fr.). Armor for the breast of a horse.

Pokanokets. See MASSACHUSETTS INDIANS.

Poland. Called by the natives *Polska*, "a plain," a former kingdom of Europe,—renowned, in mediæval history, as the sole champion of Christendom against the Turks, and more recently, and at present, an object of general and profound sympathy throughout Western Europe, from its unprecedented misfortunes. The natives belong to the great Slavonic family. The word Pole is not older than the 10th century. Poland first took rank as one of the political powers of Europe, when Miciſlas I. (962–992) occupied the throne and became a convert to Christianity. Boleslas I. (992–1025) surnamed "the Great," reunited the separate portions of the kingdom (which had been divided by Miciſlas among his sons) and extended it beyond the Oder, the Carpathians, and the Dniester, and sustained a successful war with the emperor Henry II. of Germany, conquering Cracovia, Moravia, Lusatia, and Misnia. He also took part in the dissensions among the petty Russian princes. Boleslas was recognized as "king" by the German emperors. After a period of anarchy he was succeeded by his son, Casimir (1040–1058), whose reign, and that of his warlike son, Boleslas II. (1058–1081), though brilliant, were of little real profit to the country. Boleslas III. (1102–1139), an energetic monarch, annexed Pomerania, defeated the pagan Prussians, and defended Silesia against the German emperors. A division of the kingdom among his sons was productive of much internal dissensions, under cover of which Silesia was severed from Poland; ultimately, Casimir II. (1177–1194) reunited the severed portions, with the exception of Silesia. His death was the signal for a contest among the various claimants for the throne, which was speedily followed, as usual, by a division of the country, and during this disturbance Pomerania emancipated itself from Polish rule. About the same time the Teutonic Knights were summoned by the Duke of Masovia to aid him against the pagan Prussians, but they soon became as formidable enemies to Poland as the Prussians; and conquered a great part of Podlachia and Lithuania. The Mongols swept over the country in 1241, reducing it to the verge of ruin, and defeating the Poles in a great battle near Wahlstatt. From this time Poland began to decline; various districts were ceded to the markgrafs of Brandenburg, while many districts began to be colonized by Germans. Ladislaus (1305–1333), surnamed *Lokietek*, "the Short," again restored unity to the country. In conjunction with Gedymin, grand duke of Lithuania, a vigorous war was carried on against the Teutonic Knights, on returning from which the aged monarch (he was now seventy years old) experienced a triumphant reception from his subjects, who

hailed him as the "father of his country." His son, Casimir III. the Great (1333–1370), greatly increased the power and prosperity of Poland. In the latter part of his reign he was compelled to defend sundry new acquisitions against the Tartars, Lithuanians, and Wallachians, which he did successfully. With Casimir, the Piast dynasty became extinct. Jagello (Ladislaus IV.), grand duke of Lithuania, the son-in-law of Louis the Great, king of Hungary, founded the dynasty of the Jagellons (1386–1572), and for the first time united Lithuania and Poland. Casimir IV. (1444–1492) recovered West Prussia from the Teutonic Knights. The Wallachian invaders carried off 100,000 Poles, and sold them to the Turks as slaves, 1498. Sigismund I. (1506–1548) surnamed "the Great," raised the country to the utmost pitch of prosperity; he was forced into a war with Russia, in which he lost Smolensk. Sigismund II., Augustus, was a successor worthy of him; Lithuania was finally joined indissolubly to Poland. Livonia was conquered from the Knights Sword-bearers. (See SWORD-BEARERS, KNIGHTS.) Stephen Battory (1575–1586), voivode of Transylvania, the second elective monarch, a man of energy and talent, carried on war successfully against the Russians, pursued them into the very heart of their own country, and compelled the czar to sue for peace; he also subdued the semi-independent Cossacks of the Ukraine. His successor, Sigismund III. (1586–1632), who was succeeded by his sons, Ladislaus VI. (1632–1648) and John Casimir (1648–1672), was of the Vasa family, and was the crown prince of Sweden. These three monarchs were most unworthy successors of Poland's ablest king. They were always quarreling with their neighbors, declaring war with Russia, Sweden, or Turkey, in the most imprudent and reckless manner, and often without valid pretext. But the Polish armies, though as little fostered and cared for as the other portion of the nation, were everywhere victorious; the Swedish and Muscovite armies were successively annihilated; Moscow was taken, and the Russians reduced to such an abject condition that they offered to make Sigismund's son, Ladislaus, their czar. Sweden made a similar offer to another son of the Polish monarch; but the latter's absurd behavior lost for Poland this rich result of her great victories; and the foolish policy of the whole three not only rendered fruitless all the lavish expenditures of Polish blood and treasure, but lost the country many of her richest provinces, and left her without a single ally. During the reign of this dynasty Wallachia and Moldavia were snatched by the Turks from under the Polish protectorate; Livonia with Riga was conquered (1605–1621), along with a part of Prussia (1629) by Sweden; and Brandenburg established itself in complete independence. The Cossacks rose in rebellion to a man, put themselves under the pro-

tection of Russia, and ever afterwards proved themselves the most inveterate enemies of the Poles. In the reign of John Casimir, Poland was attacked simultaneously by Russia, Sweden, Brandenburg, the Transylvanians and the Cossacks; the country was entirely overrun; Warsaw, Wilna, and Lemberg taken; but Czarniecki, after defeating Poland's enemies in detail, ignominiously expelled them from the country. But in subsequent treaties Ducal or East Prussia was given up to Brandenburg; almost all Livonia to Sweden, and Smolensk, Severia, or Tchernigov, and the Ukraine beyond the Dnieper were given to Russia. During the reign of Michael Wisniowiecki (1668-1674) a war with Turkey, concluded by an ignominious peace, was the chief event. But the senate rejected the shameful treaty, the Polish army was reinforced, the Polish monarch resigned the command to John Sobieski, and the Turks were routed with great slaughter at Choczim (1678). After the reign of Sobieski, Augustus II. of Saxony entered Poland at the head of a Saxon army, and succeeded in obtaining the throne. His war with the Turks restored to Poland part of the Ukraine and the fortress of Kaminiac; but that with Charles XII. brought nothing but misfortune. Augustus returned after the battle of Poltava; his rival retired without a contest; a close alliance was formed with Russia, and the Russian troops which had campaigned in Poland against the Swedes were, along with his Saxon army, retained. The Poles demanded their extradition, but in vain; and the Russian cabinet interfered (1717) between the king and his subjects, compelling both parties to sign a treaty of peace. This was the commencement of Poland's dependence on Russia and her consequent decline. By the instigation of Peter the Great, the Polish army was reduced from 80,000 to 18,000. For the massacre of Protestants at Thorn see MASSACRE. Civil war so weakened the kingdom that it fell an easy prey to Russia, Austria, and Prussia, in 1772, when the first partition was effected. Catherine II. of Russia, on various pretexts, advanced her army into Poland (1792), and the fruitless resistance to the united Prussians and Russians, headed by Joseph Antony Poniatowski and Kosciusko, was followed by a second partition (1793) between Russia and Prussia, which the diet were forced to sanction at the point of the bayonet. A general rising took place (1794); the Prussians were compelled to retreat to their own country; the Russians were several times routed; but an Austrian army advanced, compelling the Poles to retreat; and fresh hordes of the Russians arriving, Kosciusko at the head of the last patriot army, was defeated; and the sack of Praga, followed by the capture of Warsaw, finally annihilated the Polish monarchy. The third and last partition (1795) distributed the remainder of the country between Russia,

Prussia, and Austria. King Stanislaus resigned the crown, and died broken-hearted at St. Petersburg in 1798. Napoleon I. established the duchy of Warsaw (1807), chiefly out of the Prussian share of Poland, with the elector of Saxony at its head. The division of Poland was re-arranged by the Congress of Vienna in 1815. On November 30, 1830, Constantine (brother of the czar and military governor) and his Russians were driven out of Warsaw, and a general insurrection of the people, headed by the aristocracy, took place; and military leaders, as Radzivil, Dembinski, Bem, etc., were soon found. From January, 1831, till September 8 of the same year, a series of bloody conflicts were fought, in which the Prussians and Austrians, with pitiable subservience, aided the czar. At first, the Poles were successful; but the taking of the capital by Paskievitch soon ended the war, which was followed, as a matter of course, by imprisonment, banishment, confiscation, and enforced service in the Russian army. From this time, the independence of Poland was suppressed, and in 1832 it was declared to be an integral part of the Russian empire, and the most severe and arbitrary measures taken to Russianize the people. The outbreaks of 1833 and 1846 were punished by the gallows. Simultaneous disturbances (1846) in the Prussian and Austrian portions of Poland were summarily suppressed; their leaders in Prussia were imprisoned, and only saved from death by the revolution of March, 1848, at Berlin; and those in Austria were butchered by the peasantry, who preferred the Austrian to a national government. On November 6, 1846, the republic of Cracow was incorporated with Austria. In 1861 another insurrection broke out, and Poland was declared (in October) in a state of siege; the country continued in a state of commotion without any very decided outbreak; and on January 13, 1863, Lithuania and Volhynia were also put in a state of siege. In February, 1863, Mieroslavski raised the standard of insurrection in the northwest, on the Posen frontier, and many districts of Augustovo, Radom, Lublin, Volhynia, and Lithuania, were speedily in insurrection. It was a mere guerrilla war, and no great or decisive conflicts took place, but the whole populations of villages were put to the sword by the Russians; while murders and assassinations marked the reign of terror of the National Committee. At last, with the officious assistance of Prussia, and the secret sympathy and support of Austria, the czar's troops succeeded in trampling out (1864) the last embers of insurrection. In 1868 the government of Poland was absolutely incorporated with that of Russia.

Polans. Knee-pieces in armor.

Pole. See ORDNANCE, CARRIAGES FOR, NOMENCLATURE OF ARTILLERY CARRIAGE.

Poleaxe. An axe fixed to a pole or handle; or rather, a sort of hatchet with a handle

about 15 inches in length, and often a point or claw bending downward, or projecting from the back of its head. It was formerly used by mounted soldiers.

Polemarch. In Grecian antiquity, was originally the commander-in-chief, but afterwards, a civil magistrate who had under his care all strangers and sojourners in the city.

Pole-pad. A pad placed on the end of the pole in field-gun carriages to prevent injury to the horses.

Pole-prop. A short stick attached to the under side of the pole in field-gun carriages.

Pole-strap. See **ORDNANCE, LIMBER.**

Pole-yoke. See **ORDNANCE, LIMBER.**

Pole-yoke Branches. See **ORDNANCE, LIMBER.**

Poliabole, or Palintonne (Fr.). A ballista which was capable of throwing both arrows and stones.

Police. The cleaning of a camp or garrison; the state of a camp in regard to cleanliness.

Police Guard. An interior guard having care of the arms, property, and prisoners of the regiment; also charged with the regulation of the camp in regard to order and cleanliness. A guard for prisoners occupied in cleaning the camp.

Police, Military. This word has two significations: (1) The organized body employed within an army to preserve civil order, as distinct from military discipline. (2) A civil police with a military organization. The police of an army commonly consists of steady intelligent soldiers, who act under the orders of the provost-marshal, and arrest all persons out of bounds, civilians not authorized to pass the lines, disorderly soldiers, etc.; they also attend to sanitary arrangements. As in all military matters, the police of an army possess summary powers, and a sentence of the provost-marshal is carried out immediately after it is pronounced. Of civil police with military organization may be instanced, as specimens, the gendarmerie of France, the *sbirri* of Italy, and, in an eminent degree, the Irish constabulary.

Police Party. A working party engaged in cleaning the camp or garrison.

Police Sergeant. A sergeant specially charged with cleaning the camp.

Polkownick. Colonel of a Polish regiment.

Pollentia (now Polenza, Northern Italy). A town of the Statielli in Liguria, at the confluence of the Sturia and the Tanarus, and subsequently a Roman municipium. In its neighborhood Stilicho, the imperial general, defeated Alaric the Goth, March 29, 408.

Polotzk, Polotsk, or Polock. A town of Russian Poland, 60 miles west-northwest of Vitebsk, at the confluence of the Dwina and the Polota. It was taken by the Russians from the Poles in 1679, and again in 1655. The French under Marshal Oudinot were here defeated by the Russians under Gen.

Wittgenstein, July 30-31, 1812, the next day the Russians were defeated. After several smaller actions with various results, Polotzk was stormed by the Russians, and retaken October, 1812.

Polron. That part of the armor which covered the neck and shoulders.

Poltava, or Pultowa. A town of Russia, capital of the government of the same name, situated on the Vorskla, about 934 miles south-southeast from St. Petersburg. Here Charles XII. of Sweden was defeated by Peter the Great of Russia, July 8, 1709.

Polygars, or Paleagas. Chiefs of mountainous and woody districts in the peninsula of India, who pay only a temporary homage.

Polygon. The name applied to the many-angled forms in which the outer walls of all fortified places are built.

Polygon. A school of practice for artillery is so called in Japan.

Polyorctetes. Taker of cities; a name applied by the Greeks to a very successful general.

Polytechnic School. See **MILITARY ACADEMIES.**

Pomada. An exercise of vaulting the wooden horse, by laying one hand over the pommel of the saddle.

Pomerania. A province of Prussia, bounded north by the Baltic, east by West Prussia, south by Brandenburg, and west by the Mecklenburg duchies. It was held by the Poles, 980, and by Denmark, 1210; made an independent duchy, 1479; occupied by the Swedes in the Thirty Years' War, and divided between Sweden and Brandenburg, 1648. The Swedish part, awarded to Denmark in 1814, was given up to Prussia for Lauenburg, 1815.

Pomerium. In ancient architecture, that space of ground which lay between the walls of a fortified town and the inhabitants' houses. The term is still used among modern architects, particularly by the Italians, to describe the breadth of the terre-plein of the rampart, its inward talus, and the vacant space which is usually left between this talus and the houses of the town.

Pomfret. See **PONTEFRACT.**

Pomme. In heraldry, a bearing or device representing, or in the form of, an apple.

Pommee. In heraldry, having the ends terminating in rounded protuberances resembling apples;—said of crosses.

Pommel. The knob on the hilt of a sword. Also the protuberant part of a saddle-bow.

Pommeled, or Pommelled. In heraldry, furnished or mounted, with one or more pommels, as a sword, dagger, or the like.

Pommelion. The cascabel, or hindmost knob of a cannon.

Pompon. A tuft of wool, sometimes worn by soldiers on the top of the hat in front, instead of a feather.

Poncho. A Spanish-American garment,

consisting of a piece of woolen cloth, 5 to 7 feet long, 3 to 4 feet broad, having in the middle a slit through which the wearer passes his head, so that the poncho rests upon the shoulders and hangs down before and behind. In the U. S. army mounted troops are issued a waterproof poncho, consisting of painted cotton or rubber cloth.

Pondicherry. A maritime town, and the capital of the French settlements in India, on the Coromandel coast, 83 miles south-southwest from Madras. Pondicherry was first settled by the French in 1674, they having purchased the town two years before from the rajah of Bejapoor. The Dutch took the town in 1698; but by the treaty of Ryswick it was restored to the French in 1697. In 1748 it was besieged by the English under Admiral Boscawen, who, two months later, was compelled to raise the siege. In 1758, Count de Lally became governor-general, and attacked the English settlement of Fort St. David, which surrendered, and was totally destroyed. In 1761 it was taken by the English, under Col. Coote. By the peace of Paris, Pondicherry was restored to the French in 1763 with reduced territory. It was again taken by the English under Sir Hector Monro in 1778, and restored in 1788. In 1793 the English again repossessed themselves of Pondicherry, but the treaty of Amiens in 1802 again restored it, but only till the following year. From this time it was held by the English till, by the treaties of 1814 and 1815, it was for the last time restored to France, reduced to the narrow limits assigned by the treaty of 1783.

Poniard. A pointed instrument for stabbing; borne in the hand, or at the girdle, or in the pocket; a small dagger.

Poniard. To pierce with a poniard; to stab.

Pont à Noyelles. At this place near Amiens, France, took place a fierce indecisive conflict lasting from 11 A.M. to 6 P.M. between the Germans under Manteuffel and the French Army of the North under Faidherbe, December 28, 1870. Both sides claimed a victory.

Pontefract, or Pomfret. A town of England, in the West Riding of Yorkshire, near the river Aire, and 21 miles southwest from York. Its castle, which was finished in 1080, was taken after three successive and desperate sieges, by the Parliamentary army, and demolished by order of the Parliament.

Pontia (now Ponze). A rocky island off the coast of Latium, opposite Formiæ, which was taken by the Romans from the Volscians, and colonized, 313 B.C. Under the Romans it was used as a place of banishment for state criminals. There is a group of smaller islands round Pontia which are sometimes called *Insule Pontie*.

Pontianak. The capital of the kingdom of the same name on the west coast of Borneo, is situated near the junction of the Landak and Kapuas. There has been constant war on the southeast coast of the

kingdom since 1859. The interior of the kingdom was very much disturbed in 1864.

Pontifical States. See **PAPAL STATES**.

Pontones. Ancient square-built ferry-boats for passing rivers, as described by Caesar and Aulus Gellius.

Pontonier, or Pontonnier. A soldier having the charge of constructing bridges.

Pontons. A kind of portable boats specially adapted for the formation of floating bridges required by armies. They are constructed in various ways, of wood, metal, or prepared canvas, stretched over frames made for the purpose (the latter it is said are much in favor), and have the necessary gear placed with them for transport. The ponton used in the U. S. army is constructed as follows:

The *ponton frame* is composed of two side frames, of twelve narrow and of two wide transoms. The former are strengthened at the ends by iron straps, which are countersunk and perfectly smooth; all the edges of the frame and transoms are well rounded to prevent chafing the canvas. The wide transoms are of 10-inch by 1½-inch plank, provided with tenons to fit the mortises in the frame. The narrow transoms are of 4-inch by 2½-inch scantling. The articles of each of the above classes are made exactly alike, so that they may be interchanged. Two of the narrow transoms are provided with an iron mooring becket.

The frame when assembled is held together by a rope passed through the rings in the ends of the side frame, and tightened with a rack-stick.

The *ponton cover* is of 0000 cotton duck, double-seamed, with the border double for 1½ inches in width. The clew-line eyelets are of metal. The lashings are of 1-inch rope 18 feet in length, and looped at one end, and the cable used is of 3-inch Manilla rope, 30 fathoms long.

Bridge Equipage.—The United States bridge equipage is composed of reserve and of advance-guard trains. The former are intended to accompany large bodies of troops in the field, and are provided with the material necessary for the construction of bridges of sufficient capacity to pass large armies with their heaviest trains over rivers of any size and rapidity.

The advance-guard equipage is intended for the use of light troops, such as advance-guards, cavalry expeditions, etc. It is organized, both as regards material and carriages, with a view to rapidity of movement. At the same time, it is capable of furnishing a bridge which will fulfill all the requirements of troops engaged on such service.

Organization.—The reserve equipage is divided into trains, each of which is composed of four ponton divisions and one supply division. Each division is accompanied by tool-wagon and traveling-forge.

Each *ponton division* is complete in itself, containing all the material necessary for constructing a bridge of eleven bays, or 225 feet in length.

Each of these divisions is subdivided into four sections, two of which are ponton and two abutment sections; the former contain three ponton-wagons and one chess-wagon; the latter, one ponton-, one chess-, and one trestle-wagon each.

The ponton section contains the material for three bays, and should never be subdivided. The division may be increased or diminished at pleasure, by the changing the number of its ponton sections.

The carriages are loaded as follows: Each ponton-wagon contains 1 ponton, 7 long balks, 1 anchor, 1 cable, 5 oars, 2 boat-hooks, 20 lashings, 6 rack-sticks, 1 scoop-shovel, 2 small scoops, 1 axe, 1 hatchet, 1 bucket, and 20 pounds of spun yarn.

Each trestle-wagon (identical with ponton-wagon) contains 7 long balks, 7 trestle balks, 1 trestle complete, 2 abutment sills, 2 coils of 8-inch rope.

Each chess-wagon contains 60 chess.

The forge is identical with forge A furnished by the ordnance department.

Each tool-wagon contains 50 axes, 20 shovels, 20 spades, 15 picks, 25 hatchets, 4 broad-axes, 4 adzes, 4 cross-cut saws, 12 augers (assorted), 2 crow-bars, 2 calking-irons, 12 tin lanterns, 2 monkey-wrenches, 1 sledge, 1 steel square, 1 grindstone, 1 spirit-level, 1 coil telegraph wire, 1 coil 8-inch rope, 1 coil 1-inch rope, 1 coil spun yarn, 50 pounds iron (assorted), 25 pounds paint, 6 paint-brushes, 1 dozen chalk lines, 1 pound red chalk, 4 pounds white chalk, 6 sail-needles, 1 palm, 6 balls twine, 50 pounds 6-inch spikes, 100 pounds 6-, 8-, 10- and 20-penny nails, 2 sets blocks and falls, 2 gross each of 1-, 2- and 5-inch screws, 1 roll canvas, 20 pounds calking cotton. Also 4 boxes of carpenters' and saddlers' tools nearly identical with those furnished by the ordnance department for battery-wagon C. If desirable, extra stores to the amount of 500 pounds may be added to the load.

The *supply division* is provided with articles necessary to replace material lost or worn out, such as balk, chess, spare parts of carriages, a few complete carriages, etc.

The carriages of this division consist of ponton-, chess-, and tool-wagons, and of forges. Their number and proportion will be determined by the nature of the country in which the army is operating, and by the proximity of the main depot.

The ponton-wagon contains 17 long and 7 trestle balks. The chess-wagon, 60 chess. Tool-wagon No. 1 carries the same load as that attached to a ponton division, Tool-wagon No. 2 contains 80 rack-collars; of 6-, 8-, 10-, and 20-penny nails, 2 kegs each; of 4- and 6-inch spikes, 2 kegs each; of 1-, 2-, and 5-inch screws, 4 gross each; of 1- and 2-inch rope, 2 coils each.

The loads may be increased to the extent that circumstances will permit, by adding spare parts of carriages.

The forges are of the patterns A and B issued by the ordnance department.

Advance-guard Equipage.—The trains of this equipage are composed of 4 ponton divisions, each of which consists of 8 ponton-, 2 chess-, and 2 trestle-wagons.

The load of the *ponton-wagon* consists of 7 balks, 16 chess, 2 side frames, 1 cable, 1 anchor, and a ponton-chest containing 1 ponton cover, 14 transoms, 5 paddles, 2 scoops, 2 mallets, 20 lashings, 2 boat-hooks, 1 scoop-shovel, and 8 rack-sticks.

The *chess-wagon* contains 60 chess and 2 spare ponton covers.

The *trestle-wagon* carries 14 balks, 1 trestle complete, 1 abutment sill, and 1 coil of 8-inch rope and 1 of 1-inch rope.

The forge is forge A of the ordnance department.

When necessary, this load may be reduced by transferring a part of the tools and coal to a forage-wagon.

The ponton-wagon carries all the material necessary for constructing a complete bay. The division may, therefore, be increased or diminished by one or more ponton-wagons without disorganizing it. When a forced march is to be made, and it is desirable to lighten the loads, the chess may be removed from the ponton-wagons, the rope from the trestle-wagons, and the load of the chess-wagons may be reduced to 40 chess. The number of the latter wagons in this case must be increased to five.

The tool-wagon is loaded with the necessary tools, materials, etc., suitable to the advance-guard equipage.

There are four methods of constructing a ponton-bridge: by successive pontons; by parts; by rafts; and by conversion.

By Successive Pontons.—The location of the bridge having been selected, the ponton-wagons are brought as near the river-bank as practicable, with the rear of the carriage toward the stream. The pontons are unlashd and slid from the wagon-bed into the water; cables are attached to the anchors; one of the former is coiled in the bow of each ponton with its anchor on the top, the flukes projecting over the gunwale.

Those pontons which cast up-stream anchors are moored above the approach to the bridge, and the others below.

A trench about 1 foot in width and depth is excavated to receive the abutment sill; this should be laid horizontally, and exactly perpendicular to the axis of the bridge; it is secured by four pickets, two driven in front and two in rear, about 8 inches from each end. A ponton is brought up opposite to the abutment, and close to the shore. The ponton is then pushed off and adjusted in its place by means of shore-lines, which are made fast to mooring-posts.

As soon as the first set of balks is laid, a chess is placed on edge in the trench above mentioned, and in contact with the ends of the balks. Its upper edge should be 14 inches above the balks. Earth is rammed behind it, crowding it firmly against the balks. The chess is then laid on.

The ponton which has cast the first up-stream anchor, having dropped down to the head of the bridge, is entered by the pontoniers. Five balks are then brought up and delivered to the lashers in the second ponton, which is pushed off; the shore ends of the balks are delivered to the lashers in the first ponton, who place them on the down-stream side, and in contact with those of the first set, their cleats against the outside of the interior gunwale. They lash the balks firmly together and to the lashing-hooks at both gunwales, and then step into the third ponton.

When a bay is covered with chess, the side-rails are laid. They are placed directly over the outside balks, to which they are lashed at three points,—at the middle and immediately over the axis of each ponton, at which point the two side-rails and balks of two bays lap and are all lashed together.

In constructing a ponton-bridge there are two points that require particular attention: the anchorage, and the lashing; the men who are intrusted with their execution should be selected from the most intelligent and experienced pontoniers in the command.

The Anchorage.—The distance of the anchor from the bridge should be at least ten times the depth of the stream; with a less distance the bows of the ponton would sink too deeply in the water.

The direction of the cable when made fast to the bridge must coincide with that of the current,—i.e., a ponton in the bridge must have the same position which it would assume if riding freely at anchor. It will be remembered that the cable is not finally made fast to the ponton which casts its anchor, but to the one following it in the bridge; and due allowance must be made for this in selecting the place for casting anchor.

The number of anchors required will depend somewhat on the strength of the current. It is generally sufficient to cast an anchor up-stream for every alternate ponton, and half that number down-stream; but where the current is very rapid it may be necessary to anchor every up-stream boat, especially near the middle of the bridge. The number of anchors cannot be much diminished, however moderate the current, as the anchorage has a very marked effect in checking the horizontal oscillation to which bridges are subject when troops are marching over them.

The Lashings.—With respect to the lashings, the corresponding balks of adjacent bays lap each other by 6 feet, and are lashed together and to the gunwales at two points about 5 feet apart. Thus a strong splice is formed, making five continuous beams running the entire length of the bridge. The stability of the bridge is further increased by the manner of placing and securing the side-rails.

By Parts.—The abutment bay is formed as in the previous method. The parts are con-

structed at suitable points along the shore above the bridge, and for each is required the material for three bays. They are constructed as follows:

A ponton is moored bow and stern close to the shore, and five chess are temporarily laid from the bank to its interior gunwale, for the convenience of the pontoniers during the construction of the part.

The other two pontons are brought up in succession, and two bays are constructed in the ordinary manner, except that six chess are omitted from the roadway at both ends. Twenty-six chess and seven balks are loaded on the parts thus formed, which is then pushed off and conducted to the line of up-stream anchors, where it casts its anchor and drops down to its place in the bridge.

The first part is connected with the abutment bay by the pontoniers on shore, who construct one length of bridge flooring in the usual manner, to join the abutment ponton with the first ponton of the part.

The other parts are united as they come in position, by bays formed from the balks and chess with which they are loaded.

The down-stream anchors are cast by separate pontons provided for the purpose; and it may sometimes be necessary to cast the up-stream anchors in the same way, as the parts are not easily managed in a rapid current.

When the current is moderate, the parts may be constructed below as well as above the bridge.

By Rafts.—The abutment bay is laid in the same manner as in the last method, and the rafts differ from the parts only in having the roadway completed,—that is, the six chess at each end are not omitted. The rafts are not loaded with extra balks and chess, but are provided with two false balks, 6 feet 9 inches by 5 feet 5 inches, and with four rack-collars and wedges.

The rafts cast their up-stream anchors, and drop down to their places in the bridge. The outer pontons of the adjacent rafts are in contact, and are lashed together bow and stern by their mooring-posts. False balks are laid over the side-rails of the two rafts at their junction; and two rack-collars embrace each false balk, and the side-rails and balks under them. These collars are placed on each side, and 2 feet from, the junction of the side-rails. The wedges are driven between the false balks and the tops of the collars.

By Conversion.—The position of the bridge having been determined, and the width of the stream accurately measured, a suitable place at some distance above the position of the abutment is selected for the construction of the bridge. This place may be at a considerable distance from that which the bridge is to occupy; it is frequently on some tributary of the stream to be bridged, out of sight of the enemy's shore.

The bridge is constructed parallel to the shore; side-rails are lashed on all except the

extreme bays. The balks, chess, etc., for the abutment bay on the enemy's side, are embarked on the next to the last bay of the bridge; a ponton is lashed to the last ponton in the bridge; this contains, in addition to the articles necessary for constructing the abutment, two strong pickets. The up-stream anchors are deposited in the bows of the boats on the wheeling flank, 10 or 15 yards of their cables coiled, the remainder stretched along the bridge. Two strong spring-lines are extended and lashed, the one over the bows, the other over the sterns of all the pontons; these lines should be considerably longer than the bridge, and the ends coiled on the platform. The bridge is then allowed to float down to within 15 yards of the first abutment.

The material for the first abutment and bay is brought down in a ponton. Two strong pickets are planted to receive the spring-lines and two to receive the shore-lines, which are coiled on the platform between the first and second pontons.

The wheeling flank is pushed off, and men are stationed in the bow and stern of each ponton with oars and boat-hooks to increase or retard the progress of their ponton, as may be necessary. A detachment is stationed at the first abutment to manœuvre the spring-lines; another to prevent the pivot flank from touching shore; a turn of the shore-line is also taken around the mooring-post of the ponton, and this line is eased off, as the case may require. The anchors are cast as the pontons in which they are carried come in their proper places, and their cables are shifted to the pontons to which they are to be attached. The progress of the bridge is checked when it arrives opposite the abutments, which should be constructed during the conversion of the bridge, if the force be strong enough.

The down-stream anchors are cast by the spare pontons, as in the bridge by successive pontons.

Flying Bridge.—This term is applied to any floating support anchored to a fixed point (usually in the stream), and driven from shore to shore by the oblique action of the current on its sides.

Although these bridges do not afford a continuous communication, yet they possess some decided advantages, viz.:

They are readily established, even over the most rapid streams.

They require but little material for their construction.

They may be worked by very few men.

They permit the passage of troops of all arms, and of the heaviest carriages.

The entrance to and exit from them is easy.

They do not interrupt navigation; and they are not liable to be injured by floating bodies which, either by accident or design, are carried down-stream by the current.

The current should not be less than one yard per second.

To Construct the Raft.—The raft is formed

of six pontons. Two pontons are lashed stern to stern, and to these a third, breaking joints. A second set similar to the above are placed at a distance from the first of 26 feet from set to set. The two sets are connected by six balks over which four courses are lashed. Then fifteen balks in a manner suitable for receiving chess. The extreme chess are nailed down, and the outer courses secured by side-rails. The length of the cable should be at least one and a half times the width of the river. One, two, or three anchors are used, depending on the strength of the current. The cable is supported by pontons. The boat nearest the anchor is the largest; the distance between the boats should be such that the cable shall not touch the water between the first boat and the raft; each boat is fitted with a staging, composed of two short balks, and a supporting block, on which the cable rests and to which it is lashed. The cable is also connected with the bow of the boat by a line of such length that the boat is allowed to turn just enough to keep parallel with the raft. After the raft is attached to the cable it is passed from shore to shore once or twice, using a stern veering-line if necessary, until the anchors are firmly imbedded and the cable is stretched; the two abutments are then constructed; these do not differ from the first bay of the ordinary bridge.

The proper angle for the axis of the boat to make with the current is about 55°. This angle is gradually increased on nearing the shore, until the way of the raft is diminished sufficiently to prevent it from striking the abutment with a shock.

Trail Bridges.—When the river is not more than 150 yards wide, a sheer-line may be used in place of the anchor and cable; the sheer-line must be taut enough to keep above water.

If the banks are not high enough, the sheer-line should be elevated at each shore by passing it over a frame formed by three poles, arranged like an artillery gin. Upon this line a pulley is fixed, so that it can run freely from shore to shore; through the eye of the pulley-block a line is passed, one end of which is attached to the bow of the first, and the other to the bow of the second, boat forming the raft. The raft is manœuvred in the same manner as the flying bridge; or one end of a line may be made fast to the running-block on the sheer-line, while the other passes through a snatch-block near the stern of the raft on the up-stream side; by hauling in or letting out this line the proper direction is given to the raft.

Rope-ferries.—The rope-ferry is used when the velocity of the current is not sufficient to propel the raft. It consists of a raft or flat, provided with a standard near each end on the up-stream side. These standards are forked on top to receive the sheer-line, which is stretched across the stream in the same manner as for the trail bridge. The raft is

propelled across the stream by men on its deck hauling on the sheer-line.

Prairie Raft.—It frequently occurs in the Western country that expeditions, unaccompanied by regular ponton-trains, are compelled to cross streams so situated that it is impossible to obtain timber or other material suitable for the construction of rafts or bridges. Under these circumstances, a raft may be constructed of two canvas pontons, by means of which loaded wagons may readily be ferried over the stream. All the material required for such a raft is easily carried in one ponton-wagon. The construction is as follows: The wagon to be floated is backed into the stream until the rear wheels stand in about one foot of water. A canvas ponton is placed on each side of the wagon, parallel to and one foot from it. A balk is placed against the tail-board of the wagon, and resting upon the gunwales of the pontons. A second balk is similarly placed against the front-board of the wagon. On each side of the wagon a strong rope is made fast to the front balk, passed under the axle-trees round the rear balk, and thence back to the starting-point, where it is made fast. The raft and wagon are pushed into the stream, and, as soon as the latter is clear of the bottom, the balks are lashed to the gunwales of the pontons. A line is attached to the wagon-pole, and coiled in the bow of one of the pontons. This raft may be conveyed across the stream either by rowing, or in the manner of a trail bridge. On approaching the opposite shore, it should be turned with the wagon-pole toward the bank. As soon as the wagon grounds, the balks are removed and the wagon is drawn on shore by means of the rope attached to its pole. A single hinged canvas ponton, which is readily packed in an ordinary quartermaster wagon; will suffice for the crossing, if the wagons are unloaded and taken apart.

Box Pontons.—In localities where plank and boards can be conveniently procured, pontons may be constructed very expeditiously, by placing ten partitions of 2-inch plank, each 5 feet long, and $2\frac{1}{2}$ inches high, in parallel positions, on the top and sides of which boards are nailed: the box thus formed to be covered with pitched canvas, as described in the mode of constructing crib pontons.

Wagon-body Pontons.—Ordinary wagon-bodies, covered with pitched canvas or india-rubber blankets, may be used either as boats or pontons. The small capacity of the wagon-body requires such pontons to be placed more closely to compensate for it.

Ponton-train. See PONTONS, BRIDGE EQUIPAGE.

Pontus. An ancient kingdom in the northeast of Asia Minor, which derived its name from its being on the *Pontus Eurinus* (Black Sea), extending from the river Colchis in the east to the river Halys in the west. In early times, its various parts were designated after the tribes which

inhabited them. The most important of those tribes are,—the Leucosyri, Tihareni, Chalybes, Mosynœci, Heptacomete, Drills, Bechires, Byzeres, Colchi, Macrones, Mares, Taochi, and Phasiani. From the middle of the 7th century B.C., many of those tribes inhabiting the coast rose to great power and opulence, spreading Greek culture and civilization around them; while many of those of the interior were extremely savage and wild. According to tradition, it was conquered by Ninus, founder of the Assyrian empire; and it was certainly under the Persian dominion after the time of Cyrus the Great. In the reign of Artaxerxes II., Ariobarzanes conquered several of the Pontian tribes, and laid the foundation of an independent kingdom. Mithridates II. succeeded him 887 B.C., who by availing himself of the disputes of the successors of Alexander, considerably enlarged his dominions. Under Mithridates VI., from 120 to 68 B.C., the kingdom of Pontus rose to its highest dignity. In his war with the Romans his kingdom was dismembered by Pompey in 65 B.C., who annexed the western part of the nation, and gave the remainder to the native chiefs. In 68 A.D. Pontus was made a Roman province, and in the changes which transpired under Constantine the province was divided into two parts.

Pontvalent. A kind of light bridge, used in sieges, for surprising a post or outwork which has but a narrow moat; a flying bridge.

Poor Knights of Windsor. See KNIGHTS, MILITARY.

Port Royal. In Beaufort Co., S. C., noted as one of the earliest settlements made by the Spaniards within the present limits of the United States, and for important events during the war of the Rebellion.

Portable Forge. A light and compact blacksmith's forge, with bellows, etc., that may be moved from place to place; used frequently in the quartermaster's department.

Portate. In heraldry, borne not erect, but athwart an escutcheon; as, a portate cross.

Portcullis. Is an assemblage of several large pieces of wood, joined across one another like a harrow, and each pointed with iron at the bottom. They are sometimes suspended over the gateway of old fortified towns and castles, ready to be let down in the case of surprise, when the gates cannot be shut.

Portcullis. In heraldry, the portcullis is represented with rings at its uppermost angles, from which chains depend on either side. It was a badge of the Beaufort family, and borne in virtue of their Beaufort descent by their Tudor sovereigns. Portcullis is the title of one of the pursuivants belonging to the English College of Arms, whose office was instituted by Henry VII.

Port-fire. See LABORATORY STORES.

Portfolio. A portable case for keeping loose papers in. Hence, also, the office and functions of a minister of state or member of the cabinet; as, to receive the portfolio of war.

Portglave. An ancient name for a sword-bearer.

Portland Isle. An island off the coast of Dorset, England, which was fortified before 1142.

Porto (or Puerto) Bello. A seaport town of South America, on the north coast of the Isthmus of Darien.

Porto Novo. A seaport of British India, in the Presidency of Madras, at the mouth of the Vellaur. It suffered severely in the wars of the British government against Mysore, and fell into a state of decay. At Porto Novo, Hyder Ali, with an immensely superior army, was totally defeated by the British under Sir Eyre Coote in 1791.

Porto Rico. A Spanish possession, one of the group of West India Islands called the Great Antilles. Porto Rico was invaded in 1509 by Spaniards from Hayti, and the natives were soon exterminated by them. Towards the end of the 17th century the island was captured by the British, but was abandoned by them soon afterwards. In 1820 a revolution took place in Porto Rico, which was finally put down in 1823.

Portugal (anc. Lusitania). A kingdom in the southwest of Europe, forming the western part of the Spanish peninsula. After nine years' struggle, under Viriathes, a brave and able leader, the Lusitanians submitted to the Roman arms about 137 B.C. In the 5th century the Suevi, Vandals, and Visigoths became possessors of the country. In the beginning of the 8th century Portugal shared the fate of Spain, and was overrun by the Moors. After a long struggle, during which many battles were fought, and many illustrious deeds achieved, the Portuguese monarchy was formally established by the Cortes at Lamego in 1143, with Alfonso I. (of the Burgundian house) as king. The immediate successors of Alfonso I. were engaged in many severe struggles with the clergy, who were always ready to combine against the sovereign; but on the whole, the dignity of the kingdom was well maintained by the representatives of this family, who are, moreover, distinguished as the promoters and upholders of the maritime glory of Portugal. Alfonso, surnamed "the Brave," ascended the throne in 1325, and his reign was almost wholly occupied in wars with the Castilians and the Moslems. With his grandson, Ferdinand I., the legitimate branch of the Burgundian house became extinct in 1383. During the reign of John II., the Azores, Madeira, Cape de Verde, and other islands were seized. The discovery of Brazil and the settlements made there and on the western coast of India increased the maritime power and fame of Portugal, which were further extended under John III., who ascended the throne in 1521, and

during whose reign the Inquisition was introduced. At this period Portugal ranked as one of the most powerful monarchies in Europe. Sebastian (grandson of John III.), urged by the Jesuits, entered upon a fatal expedition to Africa against the infidels. The defeat of the Portuguese, and the capture and death of their young king at the battle of Alcazar in 1578, and the extinction of the old Burgundian line in 1580, plunged the country into difficulties and misfortunes of every kind. Philip II. of Spain succeeded in securing to himself the crown of Portugal, and annexing the Portuguese kingdom to the Spanish monarchy. This event proved disastrous in the extreme to Portugal, involving it in all the ruinous wars of Spain in the Low Countries and in Germany, the greater part of the expenses of which it bore; while the Dutch, in retaliation for Spanish aggression at home, attacked the Portuguese settlements in Brazil, and almost completely deprived them of their possessions in the Indian Archipelago. In 1640, after a forced union of 160 years, Portugal was freed, by a bold and successful conspiracy of the nobles, from all connection with Spain, and the Duke de Braganza placed on the throne, under the title of John IV. The war with Spain, which was the natural result of this act, terminated in 1668, when by the treaty of Lisbon, the independence of Portugal was formally recognized by the Spanish government. For the next hundred years, Portugal vegetated in a state of inglorious apathy. It was invaded by the French in 1807,—a measure which gave rise to the Peninsular war. The victory of Vimiera, gained by the combined English and Portuguese army in 1808, freed the land from its French assailants. A revolution broke out in Lisbon in 1820. In 1832, Dom Pedro raised a fleet and made a landing at Oporto. Admiral Napier in the mean while operated on the coast of Algarve successfully in favor of the young queen Doña Maria de Gloria, whose cause, by these victories and the support of an alliance with the great powers, finally proved victorious. Doña Maria made her entry into Lisbon in 1833; and in the following year Dom Miguel (who had disputed the throne) signed the convention of Evora, by which he renounced all pretensions to the throne. During the reign of Doña Maria insurrections and counter-insurrections were of frequent occurrence, the troops were not to be depended on in moments of emergency; guerrilla bands scourged the country at will, and openly defied the queen's authority. An armed intervention of the great powers in 1847 produced a partial abatement of the national disorders; but the queen's partiality for her unpopular ministers, Count Thomar and his brother Cabral, led to the insurrection which, without bloodshed, made the national idol, the Marquis de Saldanha, *de facto* military dictator of Portugal. The eldest son of the queen ascended the throne in 1853, as Pedro

V., under the regency of the king-consort his father. The latter used his power discreetly, and the financial disorders were partially adjusted, and since that period the general condition of the nation is more promising.

Positions, Military. The sites occupied by armies, either for the purpose of covering and defending certain tracts of country, or preparatory to the commencement of offensive operations against an enemy. A position is considered as advantageously chosen when it is on elevated ground; when it is not commanded by eminences within the range of artillery; and when, from the existence of natural obstacles, as rivers or marshes, on the wings, it is incapable of being turned,—that is, the enemy cannot, without making an extensive movement, get to the rear of the army by which the position is occupied. In the event of such points of support being wanting, the position, whether it be a plain or an eminence, should have its flanks protected by villages, or by redoubts raised for the purpose. A village, or even a single building, on the ground occupied by the army, may become the key of the position; and as, not unfrequently, on the preservation of this point depends the field of battle, such point should be well supported by troops and artillery. The highest point of ground, particularly if near the lines of operation, may also constitute the key, and is usually strengthened by one or more redoubts. Artillery should always be placed where it can act with the most effect; and when the ground occupied by an army presents alternately salient and retired points along the front of the line, the batteries should be placed at such points. Infantry may occupy any kind of ground, but should, if possible, always form a close line. It is usually placed between the batteries; and if exposed to a distant cannonade, the troops may be drawn up in a trench, the earth from which will serve to cover them without preventing them from marching out in line to meet the enemy. Cavalry must be posted on a level plain, over which it may advance with regularity when a charge is to be made; if compelled to act on broken ground, it is formed in small detachments behind the infantry, through whose intervals it may pass at proper opportunities. The power of readily appreciating the character of ground for military purposes is what is called by foreign writers the military *coup d'œil*; and this can only be acquired by a profound knowledge of military tactics of war, joined to much experience in the practice of executing military surveys, and of contemplating the appearance of ground from all possible points of view.

Posse Comitatus. A sheriff or marshal, for the purpose of keeping the peace and pursuing felons, may command all the people of his county above fifteen years old to attend him, which is called the *posse comi-*

tatus, or “power of the county.”—*Blackstone*.

Possession. To take possession, is the act of occupying any post, camp, fortress, etc., which might facilitate the operations of an army, or which previously belonged to the enemy.

Post. Any sort of ground, fortified or not, where a body of men can be in a condition of resisting the enemy.

Advance post, a spot of ground seized by a party to secure their front, and the post behind them.

Post is also the walk or position of a sentinel.

Post. In the British service, a bugle-sound. The first post is the bugling which precedes the tattoo; the last post that which follows it. Also, the piece of ground to which a sentinel's walk is limited; any place or office assigned to a soldier or body of soldiers on duty.

Post, Abandoning a. See APPENDIX, ARTICLES OF WAR, 42.

Post, Advantageous. Every situation is so called which an enemy occupies in such a manner that not only mere force of arms, but great military skill, and many stratagems, are required to dislodge him.

Post of Honor. The advanced guard is a post of honor; the right of the two lines is the post of honor, and is generally given to the eldest corps; the left is the next post, and given to the next eldest, and so on. But the laws of military discipline forbid an inconvenient accordance with this practice, as the circumstances of the case may require a very different arrangement, which it would be wanton to oppose.

Post, Sleeping Upon. See APPENDIX, ARTICLES OF WAR, 39.

Post, To. In a military sense, means to station; as, to post a sentinel. *To be posted*, in military tactics signifies to be formed ready for action. Thus, when troops are brought up in column, and ordered to deploy, it frequently happens that some part of the line is refused, in order to flank an enemy, or to cover a weak position; the part that is aligned is said to be posted. To be posted also means, in a familiar sense, to be publicly announced as an infamous or degraded character. Hence, to post a man as a coward is to stick his name up in a conspicuous place, and to accuse him of want of spirit, etc.

Postern, or Sally-port. Is a passage usually vaulted, and constructed under the rampart, to afford a communication from the interior into the ditch. The passages from the covered way into the country are likewise called sally-ports, as they afford free egress and ingress to troops engaged in making a sally or sortie.

Post-traders. Traders are allowed in the American army at the rate of one to each military camp or post, who have the exclusive privilege to trade upon the military reserve to which they are appointed, and no

other person will be allowed to trade or sell goods by sample or otherwise, within the limits of the reserve, except producers of fresh fruit and vegetables, by permission of the post commander. Post-traders are selected for the appointment by a council of administration, consisting of the three senior officers, next to the commanding officer, on duty at the post, and upon the recommendation of these officers, approved by the post commander, are appointed by the Secretary of War. The trader is authorized to keep on hand for sales to the troops, articles of wholesome food, such clothing as soldiers may be permitted to purchase, tobacco, blacking, etc., the prices to be regulated by the council of administration. At remote military posts in the United States, traders are authorized to keep on hand the necessary supplies for sales to miners, settlers, and emigrants. See **CANTEEN**, and **SUTLER**.

Pot. The paper cylinder forming the head of a signal-rocket and containing the decorations. To diminish the resistance of the air the pot is surmounted by a paper cone.

Pot, Stink-. See **STINK-POT**.

Potence (*Fr.*). Troops are ranged *en potence* by breaking a straight line, and throwing a certain proportion of it, either forward or backward, from the right or left, according to circumstances, for the purpose of securing that line. An army may be posted *en potence* by means of a village, a river, or a wood.

Potent Counter-potent. In heraldry, one of the heraldic furs, in which the field is filled with crutch-shaped figures alternately of metal and color, those of opposite tinctures being placed base against base, and point against point. The metal and colors are understood to be argent and azure, unless they be specifically blazoned otherwise. Potent counter-potent is sometimes blazoned *Vairycuppy*.

Potent, Cross. In heraldry, a cross crutch-shaped at each extremity. It is also called a Jerusalem cross, from its occurrence in the insignia of the Christian kingdom of Jerusalem, which are, argent a cross potent between four crosslets or. This coat is remarkable as being a departure from the usual heraldic rule which prohibits the placing of metal upon metal.

Potentee. A heraldic line of division which takes the form of the outline of a succession of crutch-shaped figures.

Potgun. Formerly a short, wide cannon, formed like a pot.

Potidaea. A town in Macedonia, on the narrow isthmus of the peninsula Pallene, was a strongly fortified place, and one of considerable importance. It was a colony of the Corinthians, and was founded before the Persian wars. It afterwards became tributary to Athens, and its revolt from the latter city in 482 B.C. was one of the immediate causes of the Peloponnesian war. It was taken by the Athenians in 429, after a siege of more than two years, its inhabitants

expelled, and their place supplied by Athenian colonists. In 356 it was taken by Philip of Macedon, who destroyed the city, and sold the inhabitants into slavery. Cassander, however, built a new city on the same site, to which he gave the name of *Cassandria*, and which he peopled with the remains of the old population, and the inhabitants of the surrounding towns. It was taken and plundered by the Huns, but was restored by Justinian.

Potomac. A river of the United States, formed by two branches, which rise in the Alleghany Mountains, and unite 20 miles southeast of Cumberland, Md., from which point the river flows in a generally southeasterly course, 400 miles, and falls into Chesapeake Bay, where it is 6 to 8 miles broad, 75 miles from the ocean. Line-of-battle ships ascend to Washington, 120 miles from its mouth. The Potomac forms the greater part of the boundary between Virginia and Maryland. During the civil war, both Federal and Confederate armies crossed several times the fords of the Upper Potomac, and severe actions were fought upon its banks. The largest army of the Union was named after it.

Pottawatomies. A tribe of Indians of Algonkin stock, who formerly occupied a great part of Michigan, where a few still remain. They fought against the settlers in the Pontiac war, and against the Americans in the war of the Revolution; and were allies of the British in the war of 1812, soon after which they removed to Kansas, where they now reside in a partial state of civilization, only about 500 of what is known as the Prairie band being located on a reservation.

Pouch. A case of strong leather, lined with tin divisions, for the purpose of carrying a soldier's ammunition. It is covered by a flap to preserve the cartridges from wet. The leather cases containing primers, lanyard, etc., in field and heavy artillery, and those containing a gunner's level, vent-punch, gimlet, etc., in heavy artillery, are also called pouches.

Pounder. The term used in describing the force of a cannon employed in firing solid shot; as, a 9-pounder field-gun, a 300-pounder Armstrong, etc.

Powder. See **GUNPOWDER**.

Powder-cart. A two-wheeled carriage covered with an angular roof of boards. To prevent the powder from getting damp, a tarred canvas is put over the roof; and on each side are lockers to hold shot, in proportion to the quantity of powder.

Powdered, or Semée. In heraldry, strewn with an indefinite number of small charges.

Powder-magazine. See **MAGAZINE**.

Powder-measure. See **IMPLEMENTS**.

Powder-mill. See **MILL**, **GUNPOWDER**.

Power. In military affairs as well as in all others, is knowledge—of human passions—of arms—of distance—of the skill and

numbers of an enemy. To be in the *power* of an enemy, is to have taken up, injudiciously, such a position as to expose you to a defeat whenever the enemy may think proper to attack you.

Powerful. Full of power; capable of producing great effects of any kind; as, a powerful army or navy.

Powdrfon. In heraldry, that part of armor which covers the shoulders.

Powwow. A priest or conjurer among the North American Indians. Also conjurations performed for the cure of diseases and other purposes, attended with great noise and confusion, and often with dancing.

Poynado. A poniard was formerly so called.

Pozzuoli. A city of Southern Italy, at the east of the Bay of Naples. It is first mentioned in history during the second Punic war, when it was surrounded by strong walls. In 214 B.C. it repulsed Hannibal, and subsequently became a place of importance. It was destroyed by Alaric, Genseric, and Totila. It was afterwards rebuilt by the Byzantine Greeks, but being exposed to new devastations, to earthquakes, and volcanic eruptions, it sank into decay.

Practicable. A word frequently used in military matters to express the possible accomplishment of any object. Hence, a practicable breach.

Practice, To. In a military sense, to go through the manual and platoon exercises, or through the various manœuvres, etc., for the purpose of becoming thoroughly master of military movements. Practice is likewise used to signify the act of effecting or executing any military operation.

Preliares. Among the Romans, fighting days, on which they thought it lawful to engage in acts of hostility; for during the time of some particular feasts, they reckoned it a piece of impiety to raise, march, or exercise men for war, or to encounter the enemy, unless first attacked.

Prætorians. Was, during the Roman republic, a select cohort that attended the prætor or commander of an army. They frequently decided the fate of battles. After the overthrow of the republic, Augustus formed them into nine cohorts, and fixed their station in the capital as body-guards. They became, in short, under the emperors, what "the guards" are to the monarchies of Europe. They, in addition to their military duties, frequently had the charge of state prisoners, and often acted the part of executioners. They were all picked men, chosen for the most part from Italy. Their power increased greatly under the empire until they frequently determined the fate of an emperor. Diocletian reduced their number, and Constantine disbanded them.

Prætorium. See PRÆTORIUM.

Praga. A town of Poland, on the Vistula, opposite to Warsaw, with which it communicates by a bridge of boats. In 1794 the Polish insurgents took refuge here,

and it was stormed by Suwarrow, and given up to pillage and massacre, when about 20,000 were slain. In 1880 the Grand Duke Constantine of Russia was forced to retreat from this town with his troops, at the beginning of the Polish revolution in that year, which unfortunately proved unsuccessful.

Prague. A city of Austria, the capital of Bohemia, situated on the Moldau. Prague was conquered and almost destroyed by the Hussites in 1424; but after the subsequent defeat and submission of the Hussites, the city was rebuilt. In the Thirty Years' War it suffered severely, and in 1620 the battle was fought at the White Mountain, near the city, in which Frederick V. (the "Winter King"), son-in-law of James I. of England, was completely defeated, and compelled to renounce his assumed crown, and to give up the town into the power of the emperor of Austria. Swedes and Imperialists successively gained possession of it during the war; and a century later, during the Seven Years' War, it again fell into the hands of different victors, being compelled, in 1744, to capitulate to Frederick the Great of Prussia; but he was obliged to abandon it the same year. In 1757 the king of Prussia again besieged it, but his efforts to reduce it proved ineffectual. In 1848 it was bombarded, the inhabitants having risen against the Austrian government, when great cruelties were perpetrated by the Austrian troops. A treaty of peace between Austria and Prussia was signed at Prague, August 23, 1866.

Praguerie, War of (so named from Prague, then celebrated for its civil disorders). Was the name given to the revolt of the dauphin, afterwards Louis XI., against his father, Charles VII., aided by Alexander, the bastard, of Bourbon, and other nobles. It was soon quelled; Louis was exiled, and Alexander put to death by drowning, July, 1440.

Prairie Raft. See PONTONS.

Prairie-carriage. See ORDNANCE, CARRIAGES FOR.

Prance. To spring or bound, as a horse in high mettle. To walk or strut about in a showy manner, or with warlike parade.

Precedence. Priority in rank or precedence in military life, is regulated by the date of an officer's commission, or the standing in the corps to which he may belong.

Precedent. Any act which can be interpreted into an example for future times, is called a precedent. Persons in high office are extremely scrupulous with respect to precedents, especially in military matters.

Precision. Exact limitation, scrupulous observance of certain given rules.

Predal, or Predatory War. A war carried on by plunder and rapine.

Prefect (Lat. *præfectus*). A Roman officer who was over, or who superintended, a particular command, charge, department, and the like. Of this class there were several, as the prefect of a camp, of a fleet, of the city guards, etc.

Prefect Pretorian. In Roman antiquity, was the commander of the pretorian guards.

Preferment. The state of being advanced to a higher post.

Prejudice. An opinion or decision of mind formed without due examination; prejudgment; a bias or leaning toward one side or the other of a question from other considerations than those belonging to it; an unreasonable predilection or prepossession for or against anything; especially, an opinion or leaning adverse to anything formed without proper grounds, or before suitable knowledge.

Prejudicial to Military Discipline, Conduct. See APPENDIX, ARTICLES OF WAR, 62.

Prenzlau. A town of Prussia, in the province of Brandenburg, 71 miles north-northeast from Berlin. Here, in October, 1806, a body of Prussians, 16,000 strong, under the Prince of Hohenlohe, surrendered, after the defeat of Jena, to the French under Murat.

Prepare for Action. A word of command used in the artillery.

Preponderance. In gunnery, is the excess of weight of the part in rear of the trunnions over that in front; it is measured by the lifting force in pounds, which must be applied at the rear of the base-ring, at the base-line, or at the bottom of the ratchet, to balance the piece when suspended freely on the axis of the trunnions. Preponderance was given to prevent the sudden dipping of the muzzle, in firing, and violent concussion on the carriage at the breech. Most of the heavy pieces of the late models have no preponderance, the axis of the trunnions intersecting the axis of the piece, at the centre of gravity.

Presburg. A town of Hungary, situated on the Danube, 86 miles east from Vienna. This town was once the capital of Hungary, and the emperors of Austria are still crowned here as kings of Hungary. It is noted for the treaty concluded there between France and Austria in 1805, when the Tyrol was given to Bavaria, and Venice to the French.

Prescott (Upper Canada). On November 17, 1838, the Canadian rebels were attacked by the British under Maj. Young, and (on the 18th) by Lieut.-Col. Dundas, who dispersed the insurgents, several of whom were killed, and many taken prisoners, the remainder surrendering. The troops also suffered considerably.

Presence of Mind. Ready conceptions of expedient, producing promptitude of action under difficult and alarming circumstances. A quality indispensable in a general.

Present. In the British service, means to level; to aim; to bring the musket to a horizontal position, the butt resting against the right shoulder for the purpose of discharging its contents at a given object.

Present. To offer openly; to exhibit; to give in ceremony; as, to present the colors.

Present Arms, To. In tactics is to bring the musket to a certain prescribed position, for the purpose of paying a military compliment.

Preservation of Cannon and Ammunition. See LACKER.

President. The President of the United States is commander-in-chief of the army, navy, and militia, called into service. His functions as such are assigned by Congress, but embrace of course whatever authority may be assigned to any military commander, on the principle that the authority of the greater includes that of the less. For the command, government, and regulation of the army, however, Congress has created a military hierarchy or range of subordination in the army with rights and duties regulated by Congress, and the commander-in-chief cannot make use of any other agents in exercising his command; and all orders issued by him must be according to the rules and articles made by Congress for the government of the army. In his capacity of chief magistrate of the Union, Congress has also invested the President with many administrative functions relating to military affairs; and for the performance of the latter duties the secretary of the department of war has been made his minister, upon matters connected with *matériel*, accounts, returns, the support of troops, and the raising of troops.

President. The president of a court-martial is the senior member. He preserves order in court; administers the oath taken by the judge-advocate, and the proceedings of the court are authenticated by his signature and that of the judge-advocate.

Presidio (*Sp.*). A place of defense; a garrison or guard-house.

Pressure-gauge. Called also *pressure-plug*. An apparatus invented by Gen. Rodman for measuring the pressure exerted by the gases of exploded powder. It consists essentially of a steel plunger, on the head of which the pressure is exerted. The other end of the plunger is widened out into two cutting edges which meet at an obtuse angle. This point rests on a disk of copper, into which the cutter is driven by the pressure. The pressure is deduced from the length of the cut. Two forms of the instrument are used,—one is placed in a hole bored through the side of the gun. The other is complete in itself and is placed at the bottom of the cartridge-bag. Lieut. Metcalf's (U. S. Ordnance Corps) modification of the pressure-gauge has a cutter with a helicoidal edge. To measure the cut he uses a circular scale with a hole in the centre (in which the inducted copper is placed), and a radial arm to show the extent of the spiral cut. The English modification of Rodman's instrument is called the *crusher-gauge*,—a short cylinder of copper is substituted for the disk,—the reduction in its length gives a measure of the pressure. The crusher-gauge is frequently attached to the base of the shot. A similar modification is used to test the power

of the high explosives, such as dynamite, dualin, etc. A lead cylinder is crushed in this case. A very small charge is used. The reaction is obtained by placing a heavy cylindrical shot over the charge, which rests directly in a cavity on the top of the plunger.

Preston. A town of England, in Lancashire, on the north bank of the Ribble. This town was partially destroyed by Bruce in 1322; and after declaring for the king, it was taken by the forces of the Parliament under Gen. Fairfax. Here also ended the ill-fated Jacobite rising of 1715, when, after a brave resistance, the insurgents were compelled to surrender.

Prestonpans. A village of Haddingtonshire, 8 miles east of Edinburgh. In the vicinity, on September 21, 1745, was fought the famous battle of Prestonpans, between the royal troops under Sir John Cope and the Jacobites under Prince Charles, in which the latter, with a loss of only about 10 officers and 120 men killed and wounded, routed the royal forces with great slaughter, and captured their cannon, baggage, and military chest.

Pretence, Escutcheon of, or Escutcheon Surtout. In heraldry, a small shield placed in the centre of the field of another shield. The husband of an heiress may bear the arms of his wife in an escutcheon of pretence, instead of impaling them. Feudal arms are also sometimes placed on an escutcheon of pretence, particularly in the insignia of elective sovereigns, who have been in use of bearing their own proper arms in surtout over those of the dominions to which they are entitled.

Pretorian. Appertaining to pretor; also the general's guard among the ancient Romans.

Pretorium. The hall or court where the pretor lived and administered justice. It also denoted the tent of the Roman general, in which councils of war were held. The place where the pretorian guards were quartered or lodged, was likewise called pretorium.

Prevesa. A fortified town of European Turkey, in Albania, on the north shore of the Gulf of Arta, 58 miles south-southwest of Yanina. Prevesa belonged to the Venetians from 1684 until the fall of that republic in 1797. It was then held by the French for a time, but was afterwards taken by the Turks.

Prey. Anything, as goods, etc., taken by force from an enemy in war; spoil; booty; plunder.

Pricker. A light horseman was formerly so called.

Pricker. A priming-wire (which see).

Pride. In heraldry, a peacock or other bird, when the tail is spread out in a circular form, and the wings drooped, is said to be "in his pride."

Priest-cap. In fortification, a work so named from its shape; called also *swallow-tail*. See REDAN.

Prime. To charge with the powder, percussion-cap, or other device for communicating fire to the charge, as a fire-arm.

Primer. A wafer, cap, tube, or other device for communicating fire to the charge of powder in a cannon. The cap or tube usually contains a friction- or percussion-powder. The *friction-primer* is generally used in the land service. (See FRICTION-PRIMER.) For service on shipboard, a quill filled with rifle-powder, having on the top a capsule of fulminate of mercury, is generally employed. The capsule is exploded by a blow from the lock-hammer. The *tape-primer*, used sometimes in blasting, is formed of long, flexible strips of paper or fabric containing fulminate or other quick-burning substance. The *electric primer* is used to fire simultaneous discharges, both in ordnance and blasting. In firing wet gun-cotton, the small charge of dry gun-cotton used in conjunction with the *detonating exploder* is called a *primer*. In *small-arms* the term is specially applied, at the present time, to the percussion-caps used in reloading metallic cartridge-cases. The cap is set in a recess in the head of the shell. When the firing-pin strikes the outside end of the cap, the fulminate is exploded by being driven against a perforated cone called the *anvil*. This *anvil* is usually a part of the shell. In the *Winchester primer*, recently invented, the anvil is a part of the primer itself, being inserted upon the fulminate. A shoulder in the recess holds the anvil when the cap is struck.

Priming. The powder, percussion-cap, or other device used to communicate fire to the charge in a fire-arm.

Priming-tubes. See LABORATORY STORES.

Priming-wire. A pointed wire, used to penetrate the vent of a piece, for examining the powder of the charge, or for piercing the cartridge.

Primipilarii, Primopilarii, or Primipilares. Among the Romans, were such as had formerly borne the office of primipulus of a legion. The banner was intrusted to his care. Among other privileges which the primipilarii enjoyed, they became heirs to what little property was left by the soldiers who died in the campaign.

Primipilus. The centurion belonging to the first cohort of a legion. He had charge of the Roman eagle.

Princeton. A town of Mercer Co., N. J., about 40 miles northeast of Philadelphia. This place was the scene of an important engagement during the Revolutionary struggle, although the numbers engaged were comparatively small. On hearing of the English reverse at Trenton (which see), Gen. Howe immediately ordered Cornwallis, who was in New York, to proceed with his forces to Princeton. Leaving a part of his troops at this place, he proceeded towards Trenton with the intention of giving battle to the Americans, and arrived with his vanguard on January 1, 1777. Washington, learning that only three regiments were left at

Princeton, by a circuitous night march arrived there by daybreak of January 3, surprised and completely routed the enemy with a loss of 200 killed and wounded, and as many prisoners. The American loss did not exceed 80. This event greatly aroused the drooping spirits of the colonists, who had been previously disheartened by a series of reverses.

Principes. In the Roman armies, were the infantry, who formed the second line in the order of battle. They were armed like the *hastati*, with this difference, that the former had half-pikes instead of whole ones.

Principles, Military. The basis or groundwork upon which every military movement is made, and by which every operation is conducted.

Prismatic Compass. A surveying instrument, much used on account of its convenient size and form in military sketching, and for filling up the details of a map where great accuracy is not required.

Prismatic Powder. See GUNPOWDER.

Prisoners. Are persons under arrest or in custody, whether in prison or not. Whenever any officer is charged with a crime, he is to be arrested and deprived of his sword by the commanding officer; and soldiers charged with crimes are to be confined until tried by a court-martial, or released by proper authority. (See APPENDIX, ARTICLES OF WAR, 65 and 66.) When brought into court, a prisoner should be without irons, or any manner of shackles or bands, unless there is danger of an escape, and then he may be secured with irons.—*Blackstone*.

Prisoners of War. Are soldiers captured during an engagement, siege, or continuance of hostilities, who are deprived of their liberty until regularly exchanged.

Prisons, Military. Are buildings constructed for the retention of prisoners of war, or for the safe-keeping and punishment of offenders against military law. Sometimes during war forts and other strong buildings are utilized for these purposes. The following were noted prisons during the civil war, 1861-65, for the retention of Federal prisoners of war:

Andersonville (which see).

Belle Isle.—An island in the James River near the city of Richmond, Va. The unfortunate prisoners taken were placed on this island without shelter of any kind to protect them from the scorching rays of the sun during the day or the chilly cold mists of the night, until death or exchange released them from their sufferings.

Castle Thunder.—A fort in Charleston harbor, S. C., which was used for the same purpose.

Libby.—An old tobacco warehouse in Richmond, Va., which was temporarily converted into a military prison; and for cruelty and torture to the Union prisoners this place was second only to Andersonville.

Salisbury.—A town in North Carolina, which had another depot for prisoners.

There were also prisons established for the retention of Confederate prisoners at Camp Douglas, Chicago, Camp Chase, Ohio, Elmira, N. Y., Point Lookout, Md., and Rock Island, Ill.

At *Fort Leavenworth*, Kansas, a permanent military prison was established in accordance with an act of Congress passed March 3, 1873, in which soldiers of the U. S. army are confined for serious offenses against military law.

At *Dartmoor*, a desolate region in England, a prison was constructed in 1809 for the confinement of French prisoners of war which deserves a passing notice, inasmuch as Americans were confined there during the war of 1812. It comprised 30 acres, inclosed with double walls, with seven distinct prison-houses with inclosures. In 1812 there were 6000 American prisoners of war within its walls who were treated with much cruelty, and, in consequence of the appearance of mutinous intentions of some of the prisoners on account of the tardiness of the English officials in releasing them after the treaty of peace was ratified, they were fired upon by the English soldiers, which resulted in the killing of 5 and wounding of 33 prisoners. This act was regarded in America as a wanton massacre.

Privas. A town of France, capital of the department of Ardèche, 26 miles southwest from Valence. In the civil wars of the 16th and 17th centuries in France, Privas, which was then a strongly-fortified town, played a conspicuous part, being always favorable to the Protestant party. In 1629 it was bravely defended by a small garrison under St. André de Montbrun against Louis XIII., but after a siege of two months had to be abandoned. Montbrun being soon afterwards taken was hanged, and the fortifications of Privas were leveled to the ground.

Private. The title applied in the British army to a common soldier of the cavalry and infantry; the corresponding rank in the artillery being gunner or driver, and in the engineers, the sapper. A private in the cavalry is sometimes called a trooper. In the U. S. army all the soldiers who are below the grade of non-commissioned officers are called privates.

Privy-coat. A light coat or defense of mail, concealed under the ordinary dress.

Prize. That which is taken from another; a thing seized by force, stratagem, or superior power. Hence, specifically, anything captured by a belligerent using the right of war.

Prize. The application of a lever to move any weighty body, as a cask, cannon, or the like.

Prize Agent. In the British service, a person appointed for the distribution of such shares of money as may become due to officers and soldiers after battle, siege, or capture.

Prize-bolt. A manœuvring-bolt of a mortar-bed.

Prize-money. The proportion which is

paid to the troops who are present at the capture or surrender of a place, etc., which yields booty.

Prizing. The same as *prize*, which see.

Proclamation. The act of publishing abroad; conspicuous announcements; official or general notice; publication; that which is put forth by way of public notice; an official public announcement or declaration; a published ordinance; as, the proclamation of a king. A proclamation may be issued to declare the intention of the head of a government to exercise some prerogative or enforce some law which has for a long time been dormant or suspended. In time of war, the head of the government by a proclamation may lay an embargo on shipping, and order the ports to be shut. But the most usual class of proclamations are admonitory notices for the prevention of offenses, consisting of formal declarations of existing laws and penalties, and of the intention to enforce them. Proclamations are only binding when they do not contradict existing laws, or tend to establish new ones, but only enforce the execution of those which are already in being, in such manner as the head of the government judges necessary.

Proconsul. In Roman antiquity, an officer who discharged the duties of a consul without being himself consul; a governor of a province, or a military commander under a governor. He was usually one who had previously been consul, and his power was nearly equal to that of a regular consul.

Prodd. A cross-bow, used for throwing bullets in ancient times.

Profile. A section of a parapet or other work in fortification.

Projectile. A body projected or impelled forward by force, especially through the air. In a limited military sense the term is applied to a body intended to be projected from a cannon by the force of gunpowder, or other explosive agent, to reach, strike, pass through, or destroy a distant object. The materials of which projectiles are usually composed are lead, wrought or cast iron, each possessing advantages according to the circumstances under which they are fired. But the material which combines in a greater degree than any other the essential qualities of hardness, strength, density, and cheapness, is cast iron, which is exclusively used in the U. S. service for large projectiles. Compound projectiles are sometimes made, so as to combine the good and correct the bad qualities of different metals. To obviate the serious results that may arise from the wedging of the flanges of a cast-iron projectile in the grooves of a rifle-cannon, it is frequently covered with a coating of lead or other soft metal. Cast and wrought iron have also been combined with success, and also cast iron and soft metal in such a manner as to attain the strength of one metal and the softness and expansibility of the other. Other metals, such as brass, are also used in projectiles of special construction.

Projectiles are generally classified, according to their form, into spherical, or smooth-bore, and oblong, or rifle projectiles.

Spherical Projectiles are fired mainly from smooth-bore guns. They are solid shot, shells, spherical case or shrapnel, grape, canister, carcasses, grenades, light- and fire-balls. The advantages which they possess over the oblong are their uniformity of resistance to the air, presenting the least extent of surface for a given weight, the coincidence of their centres of form and inertia; they are less liable to wedge in the bore, as they touch the surface at only one point; and they are best adapted for rolling and ricochet fire on account of the regularity of their rebounds. Solid shot are usually made of cast iron, and are designated by the diameter of the bore of the piece in which they are to be used, or by their weight. Shells are cast with a core of sand (greater or less according to the thickness required), which is afterwards removed. The mortar-shell has the thinnest walls, and contains the greatest bursting charge for the same caliber; the gun-shell is thicker, and the battering-shell is nearly as strong as the solid shot. Shells are usually designated by the weight of the solid shot of the same diameter.

Oblong Projectiles are fired principally from rifled pieces, and have been adopted on account of the increase of range and accuracy which can be obtained with them. For this purpose it is necessary that the projectile should move through the air in the direction of its length. Though experience would seem to show that the only sure method of effecting this is to give it a rapid rotary motion round its axis by the grooves of the rifle, numerous trials have been and are now being made to produce the same effect with smooth-bored guns. One of the simplest plans for this purpose is to place the centre of gravity or inertia in advance of the centre of figure. Another is to make the projectile very long, with its rear portion of wood, and its point of lead or iron, somewhat after the manner of an arrow; but these plans do not seem to be of much practical utility. The system by which the desired result is obtained with the greatest certainty is the rifle system.

Rifle System.—Spiral grooves are cut into the bore of the piece, or it is ribbed with spiral bands, and the projectile is so formed or prepared as to follow them as it passes along the bore of the piece. The principal question which now occupies the attention of those engaged in improving this species of cannon is to obtain the safest and surest means of effecting this object. Various plans have been tried to obtain the proposed object; nearly all may be ranged under the following heads:

1. **The Flanged System.**—This comprises all projectiles which have certain flanges or projections to fit into the grooves of the gun in loading. These are usually deep and few in number, rounded at their bottom edges

so as to cause the flanges or studs to pass up the inclined side when rotation is imparted. This is the system at present adopted in England. Though this plan affords a certain means of communicating the rifle motion, it has not always been found a safe one, probably from the wedging of the flanges in the grooves. Besides, the dirt from the burning of the powder collects in the grooves; and as it is difficult to clean them by the usual means, the projectile is liable to meet with obstruction in loading. To obviate these difficulties, the flanges are sometimes made of softer metal than the body of the projectile. Guns for flanged or studded projectiles usually have from 3 to 9 grooves, 0.15 to 0.25 inch deep.

2. *The Compressive System.*—By this system the projectile is forced by the action of the powder through the bore of a piece whose diameter without the grooves is less than the diameter of the projectile. Such are the projectiles for the breech-loading Krupp and Broadwell guns. These usually consist of cast iron or steel, and are covered with a coating of lead or other soft metal having horizontal ribs or corrugations, which is secured by a chemical solder, or cast into undercuts in the body of the shot. As the projectile is forced through the bore, an impression of the rifling is cut out of the ribs, the lead thus displaced finding room in the grooves between. This system has been found to work satisfactorily in breech-loading guns. The rifling should be shallow and consist of numerous grooves, slightly narrowing towards the muzzle. Large guns usually have from 26 to 76, from .05 to .08 inch deep. Experiments are now being made, with prospects of success, to substitute bands of soft copper encircling the projectile for the lead coating.

3. *The Expansive System.*—This system has been so exclusively used in the United States that it has frequently been called the American system. It embraces all projectiles which are loaded without regard to the rifling, but which are fitted with an expanding portion of some softer metal, as pewter, copper, wrought iron, or *papier-maché*, which is forced into the grooves by the discharge. This system requires for its rifling fewer grooves than the compressive, but a somewhat greater number than the flanged system. Among the projectiles of this class used during the civil war were the Blakely, Dyer, Hotchkiss, James, Parrott, Reed, Schenkle, and Stafford. The principal objections to an expanding or compound projectile are its want of strength to resist a charge of powder proportionately as large as that employed for a simple projectile, and the danger of its breaking and wedging in the bore of the piece. Of late years, however, marked improvements have been made, and projectiles of this class can now be safely fired with double their former charges. The large projectiles of this description now used in the United States con-

sist of the usual cast-iron body having a sabot, or ring of brass or copper either cast or screwed to its base. This ring is divided into an upper and lower flange or lip by an annular groove. When the gun is fired, the gases enter this groove, forcing the lower flange down upon the projectile and the upper or outer into the rifling of the gun, where it is kept during its passage through the bore.

Armstrong Projectile.—But one kind of projectile is used in the Armstrong breech-loading guns for the field service, and this is so constructed as to act as a shot, shell, or case-shot at pleasure. It consists of a very thin cast-iron shell, inclosing 42 segment-shaped pieces of cast iron built up so as to form a cylindrical cavity in the centre, which contains the bursting charge and the concussion-fuze. The exterior of the shell is thinly coated with lead, which is applied by placing the shell in a mold and pouring it in a melted state. The lead is also allowed to percolate among the segments, so as to fill up the interstices, the central cavity being kept open by the insertion of a steel core. In this state the projectile is so compact that it may be fired without injury, while its resistance to a bursting charge is so small that less than one ounce of powder is required to burst it. When the projectile is to be fired as a shot, it requires no preparation; but the expediency of using it otherwise than as a shell is doubted. To make it available as a shell, the bursting tube, the concussion- and time-fuzes, are all to be inserted; the bursting tube entering first and the time-fuze being screwed in at the apex. If the time-fuze be correctly adjusted, the shell will burst when it reaches within a few yards of the object; or failing in this, it will burst by the concussion-fuze when it strikes the object, or grazes the ground near it. If it be required to act as a canister-shot upon an enemy close to the gun, the regulation of the time-fuze must be turned to the zero of the scale, and then the shell will burst on leaving the gun. The Armstrong projectiles for the muzzle-loading guns have rows of brass or copper studs projecting from their sides to fit into the grooves of the gun, which are constructed on the *shunt* principle. The projectile is made of wrought iron, or low steel, with very thick sides. There is no fuze, the explosion resulting from the heat generated by the impact, and the crushing in of the thin cap which closes the mouth of the powder-chamber. The sides and bottom of the shell being thick enough to resist crushing by the impact, and also to resist the explosive force of the bursting charge, its effect will, after penetration, be expended on the backing of the armor, or the decks which the armor is intended to screen. Such projectiles are called "blind shells."

Blakely Projectile.—Capt. Blakely's projectile has an expanding cap attached to its base by means of a single tap-bolt in the centre. It is prevented from turning by

radial grooves cast on the surface of the bottom of the projectile, into which the cup is pressed by the charge. The angle between the curved sides of the cup and the bottom of the projectile is filled with a lubricating material. On the forward part of the body are soft metal studs, more numerous than the grooves of the bore of the piece, that some of them may always form a bearing surface for the projectile against the lands. The driving sides of the grooves are deeper than the others.

Dyer Projectile.—The Dyer projectile is composed of a cast-iron body, and a soft metal expanding cup, attached to its base. The adhesion of the cup is effected by tinning the bottom of the projectile, and then casting the cup on to it. The cup is composed of an alloy of lead, tin, and copper, in certain proportions. This projectile, as improved by Mr. Taylor at the Washington Arsenal, gives good results for even as large a caliber as 12 inches.

French Projectile.—The projectile used in the French field service is made of cast iron, and has 12 zinc studs on its sides, arranged in pairs, so as to fit the 6 grooves of the gun. For the larger cannon projectiles, but 8 studs are used, and these are cast on the projectile, nearly opposite to its centre of gravity; the bearing sides of the studs are faced with white metal to diminish friction against the grooves of the bore. The shape of the grooves is such as to centre the projectile. The latter projectile is used with increasing, the former with grooves of uniform twist. Russian, Austrian, and Spanish artillery projectiles belong to the studded, or button class, but differ from each other in the details of their construction.

Hotchkiss Projectile.—The Hotchkiss projectile is composed of three parts: the body, the expanding ring of lead, and the cast-iron cup. The action of the charge is to crowd the cup against the soft metal ring, thereby expanding it into the rifling of the gun. The time-fuze projectile has deep longitudinal grooves cut on its sides to allow the flame to pass over and ignite the fuze. The last rifle projectile submitted by Mr. Hotchkiss has an expanding cup of brass attached to its base in a peculiar manner. The cup is divided into four parts by thin projections on the base of the projectile. This arrangement is intended to facilitate the expansion of the cup and to allow the flame to pass over to ignite the fuze.

James Projectile.—The expanding part of the James projectile consists of a hollow formed in the base of the projectile, and eight radial openings, which extend from this hollow to the surface for the passage of the flame of the charge, which presses against and expands into the grooves of the bore, an envelope or patch, composed of paper, canvas, and lead. In a later pattern of this projectile, the internal cavity and radial openings are omitted, and the outside is furrowed with longitudinal grooves which in-

crease in depth towards the base of the projectile, forming inclined planes, up which the outer covering of lead and canvas is moved by the force of the charge and expanded into the rifling of the piece.

The first projectile used in Parrott guns was invented by Dr. Reed of Alabama, in 1856 or 1857, and was made at Parrott's foundry. It consisted of a soft wrought-iron cup, slightly swedged to fit the grooves, upon which was cast the body of the shot.

Palliser Projectile.—This is the most formidable armor-piercing projectile in use. It owes its efficiency to the material used,—chilled cast iron. In the later forms the head only is chilled, the body being cast in sand. Both shot and shell are cast with a core. The shell is "blind." The curve of the ogival head is struck with a radius of one and one-half times the diameter of the projectile.

Parrott Projectile.—Capt. Parrott's projectile, as now made, is composed of a cast-iron body with a brass ring cast into a rabbet formed around its base. The flame presses against the bottom of the ring and underneath it so as to expand it into the grooves of the gun. To prevent the ring from turning in the rabbet, the latter is recessed at several points of its circumference. *Parrott's incendiary shell* has two compartments formed by a partition at right angles to its length. The lower and larger space is filled with a burning composition, the upper one is filled with a bursting charge of powder, which is fired by a time- or concussion-fuze. The burning composition is introduced through a hole in the bottom of the shell, which is stopped up with a screw-plug.

Sawyer Projectile.—The Sawyer projectile has upon its sides six rectangular flanges or ribs to fit into corresponding grooves of the bore. To soften the contact with the surface of the bore, the entire surface of the projectile is covered with a coating of lead and brass-foil. The soft metal at the corner of the base is made thicker than at the sides to admit of being expanded into the grooves, and thereby closing the windage. In the latest pattern of Sawyer projectiles, the flanges are omitted, and the projectiles are made to take the grooves by the expansion of the soft metal at the base, which is peculiarly shaped for this purpose.

Schenkle Projectile.—Schenkle's projectile is composed of a cast-iron body, the posterior portion of which is a cone. The expanding portion is a *papier-mâché* sabot or ring, which is expanded into the rifling of the bore by being forced on to the cone by the action of the charge. On issuing from the bore the wad is blown to pieces, leaving the projectile unencumbered in its flight. A great difficulty has been found in practice in always getting a proper quality of material for the sabot, and in consequence, these projectiles have not been found to be reliable.

Scott Projectile.—The shell devised by Commander Scott of the British navy, for firing molten iron, has three ribs cast upon it, which fit grooves so constructed as to centre it in the bore of the gun when fired. The interior of this shell is lined with loam to prevent the heat of the charge from penetrating through to the bursting charge. It is supposed to be broken and its contents diffused on striking the object.

Whitworth Projectile.—The cross-section of the bore of the Whitworth gun is a hexagon with the corners slightly rounded. The projectile is first formed so that its cross-section is a circle, and its sides taper towards both ends. The middle portion is then carefully planed off to fit the bore of the gun. The Whitworth blind shell for firing against armor-plates, is made of tempered steel, and each end is closed with a screw. To prevent the heat of impact from acting too soon on the bursting charge, it is surrounded by one or more thicknesses of flannel. A 7-inch shell of this kind has been found to have sufficient strength and stiffness to penetrate 5 inches of wrought iron before bursting.

Confederate Projectiles.—The rifle projectiles used by the Confederates in the late war belonged, with a few exceptions, to the expanding class. Besides the above there are three kinds of projectiles much used in the U. S. service, viz.:

Absterdam Projectile.—The best form is cast in a single piece, and has an expanding ring of brass which projects three-eighths of an inch beyond the base of the projectile.

Eureka Projectile.—Consists of a cast-iron body in one piece, with a brass sabot; the sabot is an annular disk intended to move on the frustum of a cone with an expanding cup in rear to take the grooves.

Ordnance Projectile.—Consists of a cast-iron body, with a sabot composed of an alloy of lead and tin, which is cast on the base of the projectile, and is held in position by undercuts and dovetails, the action of the charge being to force the sabot on the cast-iron body and to make it take the grooves.

Projectiles of special construction were formerly much used for particular purposes, as:

Bar-shot, which consisted of two hemispheres or spheres connected by a bar of iron either rigidly or in such a manner as to traverse its length; these were useful in cutting the masts and rigging of ships.

Chain-shot.—This differed from bar-shot only in the mode of connection, which was a chain instead of a bar.

Chain-ball.—To arrest the motion of rotation of an oblong projectile thrown under high angles, and with a moderate velocity, it has been proposed to attach a light body to its posterior portion by means of a cord, or chain, which will offer a resistance to the flight of the projectile, and cause it to move with its point foremost.

Nail-ball.—A round projectile, having a projecting pin to prevent it from turning in the bore of the piece.

Grooved Ball.—An oblong projectile, having spiral grooves cut along its base, by means of which the action of the charge produces rotation about the longer axis of the projectile. Sometimes these grooves are cut in the forward part of the projectile for the action of the air. Neither of these plans has succeeded in practice.

Bullets.—A bullet is a leaden projectile discharged from a musket, fowling-piece, pistol, or similar weapon.

Spherical Bullets.—When smooth-bore muskets alone were used the bullets were chiefly spherical in form and made by casting; at present, however, spherical bullets are manufactured by a compressing machine invented by Mr. George Napier. They are denominated by the number contained in a pound. In consequence of the great improvements that have been made of late in small-arms, the spherical bullet is now very little employed for military purposes, its use being chiefly confined to case-shot.

Oblong Bullets.—Are denominated by their diameter and weight. About 1600, when rifles began to be used as a military weapon, spherical bullets were fired; in the early part of the 18th century, however, it was found that good results could be obtained by the use of oblong projectiles of elliptical form. The great difficulty, however, of loading the rifle, which was ordinarily accomplished by the blows of a mallet on a stout iron ramrod, prevented it from being generally used in regular warfare. The foregoing plan was afterwards improved by making the projectile a little smaller than the bore, and wrapping it with a patch of cloth greased to diminish the friction in loading. The improvements which have been made in the last thirty years have entirely overcome this difficulty, and rifles are now almost universally employed, although until 1855 the mass of the American infantry was armed with smooth-bored muskets. The first person to overcome the difficulty of loading rifles was M. Delavigne, an officer of the French infantry. His plan, proposed in 1827, was to make the projectile small enough to enter the bore easily and to attach it to a sabot, which, when in position, rested upon the shoulder of a cylindrical chamber formed at the bottom of the bore to contain the powder. In this position the projectile was struck two or three times with the ramrod, which expanded the lead into the grooves of the barrel. The method of Delavigne was afterwards improved by Thouvenin and Minié, both officers of the French service. The projectiles suggested by them were elongated in form and the metal of the projectile was forced into the grooves of the rifling by means of a plug or cup driven into the base of the projectile, which was cast hollow for that purpose. The cup used in the Minié bullet was made of sheet-iron.

Mr. Greener of England appears to have been the first person to utilize this expanding or dilating action. Various other bullets have been invented, of greater or less usefulness, as the Whitworth, Pritchett or Enfield, and those used in the French, Austrian, and Swiss services. In the British service, the Enfield bullet is employed; this has a perfectly smooth exterior, and a conical box-wood plug inserted into a cavity at the base; they are made by machinery which draws in a coil of leaden rod, unwinds it, cuts it to the required length, stamps out the bullets with steel dies, drops them into boxes, and conveys them away.

United States Bullets.—The bullets used in the U. S. service are of two kinds, one for the rifle and carbine ball-cartridge weighing 406 grains, the other for the revolver cartridge weighing 280 grains. The metal used is an alloy of 16 parts of lead and 1 part of tin. The bullet in shape is a cylinder surmounted by a conical frustum terminating in a spherical segment. It has three rectangular cannellures which contain the lubricant. This latter is protected by the case which covers more than half the length of the bullet. A dished cavity is made in the base of the bullet to bring it to the proper weight.

Projectiles, Theory of. Is the investigation of the path, or *trajectory* as it is called, of a body which is projected into space. A body thus projected is acted upon by two forces, the *force of projection*, which, if acting alone, would carry the body onwards forever in the same direction and at the same rate; and the *force of gravity*, which tends to draw the body downwards towards the earth. The force of projection acts only at the commencement of the body's motion; the force of gravity, on the contrary, continues to act effectively during the whole time of the body's motion, drawing it farther and farther from its original direction, and causing it to describe a curved path, which, if the body moved in a vacuum, would be accurately a parabola.

Trajectory in Vacuo.—This general theory is not the object of the present discussion, but simply the theory of projectiles as far as it relates to fire-arms. The path that the centre of gravity of a projectile would describe in *vacuo* would be a parabola, and the greatest range given by an angle of fire of 45°. Under the same angles of fire the range would be proportional to the squares of the velocities, the velocity least at the summit of the trajectory, and the velocities at the two points in which the trajectory cuts the horizontal plane equal. The time of flight would be given for an angle of 45° by the formula:

$$T = \sqrt{X}$$

In which T represents the time of flight, and X the range expressed in feet. These results are found to answer in practice for projectiles which experience slight resist-

ance from the air, or for heavy projectiles moving with low velocities, as is usually the case with those of mortars and howitzers, for which, within certain limits, the above results are sufficiently accurate in practice.

Trajectory in Air.—A body moving in air experiences a resistance which diminishes the velocity with which it is animated. Thus it has been shown that certain cannon-balls do not range one-eighth as far in the air, as they would if they did not meet with this resistance to their motion, and small-arm projectiles which have but little mass are still more affected by it. This resistance is expressed by the formula:

$$P = A_r R^2 \left(1 + \frac{v}{r}\right) v^2;$$

in which P represents the resistance in the terms of the unit of weight, v the velocity, and pR^2 the area of a cross-section of the projectile, A the resistance in pounds on a square foot of the cross-section of a projectile moving with a velocity of one foot, r is a linear quantity depending on the velocity of the projectile. For all service spherical projectiles A is .000514, and for all service velocities r is 1.427 feet; the value of A for the rifle-musket bullet is .000558; hence, the resistance of the air is about one-third less on the ogival than on the spherical form of projectile. A being a function of the density of air, its value depends on the temperature, pressure, and hygrometric condition. It has been demonstrated that the final velocity of a projectile falling in the air is directly proportional to the product of its diameter and density, and inversely proportional to the density of the air; the retarding effect of the air is less on the larger and denser projectiles, and for the same caliber an oblong projectile will be less retarded by the air than one of spherical form and consequently with an equal, perhaps less, initial velocity, its range will be greater. It has also been shown that great advantage in point of range is obtained by using large projectiles instead of small ones, solid projectiles instead of hollow ones, leaden projectiles instead of iron ones, and oblong projectiles instead of round ones. The ogival form, or the form of the present rifle-musket bullet, experiences less resistance in passing through the air than any other known. In consequence of the variable nature of the resistance of the air, it has been found impossible to find an accurate expression for the trajectory. Capt. Didion, of Metz, has, however, found an approximate solution; he states that all cases of the movement of a projectile may be divided into three classes: 1st. When the angle of projection is slight or does not exceed 8°, as in the ordinary fire of guns, howitzers, and small-arms,—for slight variations of the angle of projection above or below the horizontal, the form of the trajectory may be considered constant, and when the object is but slightly raised above or depressed below

the horizontal plane, it may be considered as in this plane. 2d. When angles of projection do not exceed 10° or 15° , as in the ricochet fire of guns, howitzers, and mortars. 3d. When the angle of projection exceeds 15° , as is the case in mortar fire. For each of these cases he has deduced formulæ, by means of which the range, time of flight, etc., can be determined. As a projectile rises in the ascending branch of its trajectory, its velocity is diminished by the retarding effect of the air, and the force of gravity, in consequence of the resistance of the air alone, the velocity continues to diminish to a point a little beyond the summit of the trajectory, where it is a minimum, and from this point it increases, as it descends, under the influence of the force of gravity, until it becomes uniform, which event depends on the diameter and weight of the projectile, and the density of the air.

The inclination of the trajectory decreases from the origin to the summit, where it is nothing, it increases in the descending branch from the summit to its termination, and if the ground did not interpose an obstacle, it would become vertical at an infinite distance. An element of the trajectory in the descending branch has a greater inclination than the corresponding element of the ascending branch. Strictly speaking, therefore, the trajectory of a projectile in air is not a parabola, but is an exponential curve with two asymptotes, the first the axis of the piece, which is tangent to the trajectory when the initial velocity is infinite, the second a vertical line toward which the trajectory approaches, as the horizontal component of the velocity diminishes and the effect of the force of gravity increases. The curvature of the trajectory increases in the ascending branch to a point a little beyond the summit. The point of greatest curvature is situated nearer the summit than the point of minimum velocity. In the fire of mortar-shells, under great angles of projection, the trajectory may be considered as an arc, in which the angle of fall is slightly greater than the angle of projection. In the formulæ deduced by Didion, in consequence of considering the inclination of the trajectory as constant, the resistance of the air is slightly underestimated in the more inclined portions of the trajectory or at the beginning and end, and slightly overestimated in the less inclined portions or about the summit. It follows that the calculated trajectory will at first rise above the true one, then pass below it and again pass above it; the calculated ranges are therefore slightly in excess of the true ones.

Trajectory of Oblong Projectiles.—From the law of inertia, a rifle projectile moves through the air with its axis of rotation parallel to the axis of the bore. Hence it follows that an oblong projectile, fired under a low angle of projection, presents a greater surface toward the earth, and less parallel to it, than a round projectile of the same

weight, consequently the vertical component of the resistance of the air is greater, and the horizontal component less, in the first case than in the second. The effect of this will be to give an oblong projectile a flatter trajectory and longer range than a round one.

Deviation of Projectiles.—The path described by the centre of inertia of a projectile, moving under the influences of gravity and the tangential resistance of the air, is called the *normal trajectory*. In practice, various causes are constantly at work to deflect a projectile from its normal path. All deviating causes may be divided into two classes;—those which act while the projectile is in the bore of the piece, and those which act after the projectile has left it. The first class includes all the causes which affect the initial velocity, and give rotation to the projectile; the second includes the action of the air.

Causes which affect Initial Velocity.—The principal causes which affect initial velocity are variations in the weights of the powder and projectile, the manner of loading, the temperature of the piece, and the balloting of the projectile along the bore. *Rotation.* The principal cause of the deviation of a projectile is its rotation combined with the resistance of the air. *By balloting.* If the projectile be spherical and homogeneous, rotation is produced by the bounding or balloting of the ball in the bore, arising from the windage. In this case the axis of rotation is horizontal, and passes through the centre of the ball; the direction of rotation depends on the side of the projectile which strikes the surface of the bore last. The velocity of rotation from this cause depends on the windage, or depth of the indentations in the bore, the charge being the same. *By eccentricity.* If, from the structure of the ball, or from some defect of manufacture, the centre of gravity does not coincide with the centre of figure, rotation generally takes place around the centre of gravity. This arises from the fact that the resultant of the charge acts at the centre of figure, while inertia, or resistance to motion, acts at the centre of gravity. For the same charge the velocity of rotation passes through the centre of gravity, and is perpendicular to a plane containing the resultant of the charge and the centres of figure and gravity. For the same charge, the velocity of rotation is proportional to the lever arm, or the perpendicular, let fall from the centre of gravity to the resultant of the charge. Knowing the position of the centre of gravity of the ball in the bore, it is easy to foretell the direction and velocity of rotation. In general terms the front surface of the projectile moves toward the side of the bore on which the centre of gravity is situated, and the velocity of rotation is greatest when the line joining the centres of gravity and figure is perpendicular to the axis of the bore.

The Effect of Rotation.—The effect of rotation in producing deviation may be discussed under three heads: 1st. When the projectile is spherical and concentric; 2d. When it is spherical and eccentric; and, 3d. When it is oblong. If a projectile be spherical and concentric, rotation takes place from contact with the surface of the bore around a horizontal axis, and the effect will be to shorten or lengthen the range, as the motion of the front surface is downward or upward. If the projectile be eccentric, the motion of the front surface is generally toward the side on which the centre of gravity is situated, and the deviation takes place in this direction. The extent of the deviation for the same charge depends on the position of the centre of gravity; the horizontal deviation being the greatest when the centres of gravity and figure are in a horizontal plane, and the line which joins them is at right angles to the axis of the piece; the vertical deviation will be the greatest when these centres are in a vertical plane, and the line which joins them is at right angles to the axis of the piece. If the axis of rotation coincide with the tangent to the trajectory throughout the flight, all points of the surface have the same velocity in the direction of the motion of translation, and there will be no deviation. This explains why it is that a rifle projectile moves through the air more accurately than a projectile from a smooth-bored gun. In accurate firing, therefore, it is important to know the true position of the centre of gravity. In ricochet firing over smooth water, the number of grazes may be increased or diminished by placing, in loading, the centre of gravity above or below the centre of figure.

Deviation of Oblong Projectiles.—The cause of the deviation of an oblong rifle projectile is quite different from one of spherical form. An oblong projectile moving in the air is acted upon by two rotary forces, viz.: one which gives it its normal rotary motion around its axis of progression, and another the resistance of the air, which, in consequence of the deflection of the axis of progression from the tangent to the trajectory by the action of gravity, does not pass through the centre of inertia, but above or below it; depending on the shape of the projectile. From a law of mechanics, a body thus circumstanced will not yield fully to either of the forces that thus act upon it, but its apex will move off with a slow uniform motion to the right or left of the vertical plane, depending on the relative direction of the two rotary forces. If the action of these forces be continued sufficiently long, it will be seen that the axis of the projectile before referred to describes a cone around a line passing through the centre of inertia and parallel to the direction of the resistance of the air. Owing to the short duration of the flight of an ordinary projectile, it is only necessary to consider the first part of this conical motion. If the projectile rotates in

the direction of the hands of a watch to the eye of the marksman, and the resultant of the resistance of the air pass above the centre of inertia, as it does in the service bullet with a conoidal point, then the point of the projectile will move to the right, which brings the left side of the projectile obliquely in contact with the current of the air. The effect of this position with reference to the air will be to generate a component force that will urge the projectile to the right of the plane of fire. This peculiar deviation was called by the French officers that first observed it, "*derivation*," or "*drift*."

Summary of Deviating Causes.—The following summary may be considered as embracing nearly all the causes of deviation of cannon and small-arm projectiles: 1st. *From the construction of the piece.* These causes are, wrong position of the sight; bore not of the true size; windage, etc. 2d. *From the charge of powder.* Improper weight; form of grain and variable quality of the powder, etc. 3d. *From the projectile.* Not of the exact size, shape, or weight; disfigurement in loading, or on leaving the bore; eccentricity. 4th. *From the atmosphere, etc.* The effect of wind; variations in the temperature, moisture, and density of the air; position of the sun as regards the effect on the aim; difference of level between the object and the piece; and rotation of the earth. It is found that a projectile will deviate to the right of the object in the northern hemisphere whatever may be the direction of the line of fire, and at a distance from it, depending on the latitude of the place, and on the time of flight and the range of the projectile.

Projectiles, Effects of. The effects of projectiles, and particularly that of penetration, depend on the nature of the projectile, its initial velocity, and the distance of the object. The effects of the various kinds of projectiles upon iron and steel plates are not yet thoroughly understood, and experiments are still being made, particularly in England, to determine the best combinations of wrought and cast iron, and steel, to resist the penetration of the enormous projectiles of the present day. Their effects upon wood, earth, etc., are, however, better understood.

Effect on Wood.—The effect of a projectile fired against wood varies with the nature of the wood and the direction of the penetration. If the projectile strikes perpendicular to the fibres, and the fibres be tough and elastic, as in the case of oak, a portion of them are crushed, and others are bent under the pressure of the projectile, but regain their form as soon as it has passed by them. In consequence of the softness of white pine, nearly all the fibres struck are broken, and the orifice is nearly the size of the projectile; for the same reason the effects of the projectile do not extend much beyond the orifice; pine is therefore to be preferred to oak for structures that are not intended to resist cannon projectiles, as block-houses, etc.

Effect on Earth.—Earth possesses advantages over all other materials as a covering against projectiles; it is cheap and easily obtained, it offers considerable resistance to penetration, and to a certain extent regains its position after displacement. It is found by experience that a projectile has very little effect on an earthen parapet unless it passes completely through it. Wherever masonry is liable to be breached, it should be masked by earthworks with natural slopes. Gen. Gillmore states that the powers of resistance of pure, compact, quartz sand to the penetration of projectiles very much exceed that of ordinary earth, or mixture of several earths. The size of the openings formed by the passage of a projectile into the earth is about one-third larger than the projectile, increasing, however, towards the outer orifice. Rifle projectiles especially are easily deflected from their course in earth, hence their penetration is variable. Unless a shell be very large in proportion to the mass of earth penetrated, its explosion will produce but little displacement,—generally, a small opening is formed around an exploded shell by the action of the gas in pressing back the earth. Time-fuzes, being liable to be extinguished by the pressure of the earth, are inferior to percussion-fuzes, which produce explosion when the projectile has made about three-fourths of its proper penetration. The penetration in earth of oblong, compared to round projectiles, when fired with service charges, and at a distance of about 400 yards, is at least *one-fourth greater*. This difference, however, is less at short and greater at long distances. The penetrations of similar projectiles into a given substance, are proportional to the squares of the velocities of impact and to the diameters and densities of the projectiles.

Penetration in Water.—The penetration of a rifle projectile in water depends much on the direction of its axis with respect to penetration; for instance, penetration rapidly diminishes at long distances, as the axis of the projectile strikes the surface of the water under a diminished angle.

Effect on Masonry.—The effect of a projectile against masonry is to form a truncated conical hole, terminated by another of a cylindrical form. The material in front of and around the projectile is broken and shattered, and the end of the cylindrical hole even reduced to powder. The exterior opening varies from four to five times the diameter of the projectile, and the depth varies with the size and density of the projectile, and its velocity. When a projectile strikes against a surface of oak, as the side of a ship, it will not stick if the angle of incidence be less than 15° , and if it do not penetrate to a depth nearly equal to its diameter. Solid cast-iron shot break against granite, but not against freestone or brick. Shells are broken into small fragments against each of these materials.

Breaching.—Formerly stone projectiles

were much used for breaching, but from the want of sufficient hardness in these projectiles, the besiegers were forced to commence battering at the top of the wall where the least resistance was offered, and gradually to lower the shot until the breach reached the wrecks already formed at the base of the wall. Iron projectiles superseded stone, and then more rapid modes of effecting a practicable breach were suggested. The easiest manner of making the cut is to direct the shots upon the same line, and form a series of holes a little greater than a diameter apart, and then to fire a second series of shots, directed at the intervals between the first, and so on, until an opening is made completely through the wall. If the portion of the wall between the vertical cuts should not be overthrown by the pressure of the earth behind, it must be detached by a few volleys of solid shot, fired at its centre.

Breaching with Rifle-cannon.—The foregoing has reference particularly to breaching masonry with smooth-bored guns. The same principle is applicable to rifled guns, the only difference being that, from their superior penetration and accuracy, the latter are effective at much longer distances. The most destructive projectile against masonry is the elongated percussion shell.

Effect of Bullets.—From experiments made in Denmark, the following relations were found between the penetration of a bullet in pine and its effects on the body of a living horse, viz.: 1st. When the force of the bullet is sufficient to penetrate 0.81 inch into pine, it is only sufficient to produce a slight contusion of the skin. 2d. When the force of penetration is equal to 0.63 inch, the wound begins to be dangerous, but does not disable. 3d. When the force of penetration is equal to 1.2 inch, the wound is very dangerous. A plate of wrought iron three-sixteenths of an inch thick, is sufficient to resist a rifle-musket bullet at distances varying from 20 to 200 yards. Iron of thickness, however, will not resist bullets of the present day. That a rope mantlet may give full protection against rifle-musket bullets, it should be composed of five layers (three vertical and two horizontal) of $\frac{1}{4}$ -inch rope.

Projection. In mathematics, the action of giving a projectile its motion. It is also used to signify a scheme, plan, or delineation.

Proking-spit. A large Spanish rapier.

Prolongation. An extension of leave of absence, or a continuation of service.

Prolongation of the Line. Is effected by parallel movements at the right or left of any given number of men on a front division.

Prolonge. See IMPLEMENTS.

Prolonge-hooks. See ORDNANCE, CARRIAGES FOR, NOMENCLATURE OF ARTILLERY CARRIAGE.

Promotion.—This word signifies, in military matters, the elevation of an individual to some appointment of greater rank and trust to the one he holds.

Promulgation. The act of promulgating; publication; open declaration; as, the promulgation of the sentence of a court-martial.

Proof. A term applied to the testing of powder, and also of ordnance, which are always fired with a regulated charge of powder and shot, to test their strength and soundness.

Proof. Conclusive evidence.

Proof. Capable of withstanding; as, bomb-proof, shot-proof.

Propel. To drive forward; to urge or press onward by force; to move or cause to move; balls are *propelled* by the force of gunpowder.

Proper. A term which serves to mark out a thing more especially and formally. Thus, the *proper form of a battalion* is the usual continuity of line given to the formation of a battalion, and which remains unaltered by the wheelings of its divisions; or if altered, is restored by the same operation. *Proper right*, is the right of a battalion, company, or subdivision, when it is drawn up according to its natural formation. *Proper pivot flank*, in column, is that which, when wheeled up to, preserves the division of the line in the natural order, and to their proper front. The other may be called the *reverse flank*.

Proper. In heraldry, a charge borne of its natural color, is said to be *proper*. An object whose color varies at different times and in different examples, as a rose which may be white or red cannot be borne *proper*.

Prosecute. To carry on; to continue; as, to prosecute the war. Also, to accuse of some crime or breach of law, or to pursue for punishment before a legal tribunal; to proceed against judicially.

Prosecutor. In courts-martial the judge-advocate is usually the prosecutor; but if an officer prefers a charge, he sometimes appears to sustain the prosecution. No person can appear as prosecutor not subject to the articles of war, except the judge-advocate.—*Hough*.

Providitor. One employed to procure supplies for an army; a purveyor.

Proving-ground. Ground used for testing powder or ordnance.

Provision. Properly to victual; to furnish with provisions.

Provost. The temporary prison in which the military police confine prisoners till they are disposed of.

Provost Cells. Also called regimental or garrison cells, in the British service are those certified cells under a provost or acting provost-sergeant, in which court-martial prisoners may be imprisoned up to forty-two days.

Provost-Marshal. In the army, is an officer appointed to superintend the preservation of order, and to be, as it were, the head of the police of any particular camp, town, or district. He has cognizance of all camp-followers, as well as members of the

army. His power is summary, and he can punish an offender, taken *flagrante delicto*, on the spot, according to the articles of war.

Provost-Sergeant. Is a sergeant who is charged with the military police of a corps. He is generally given one or two non-commissioned officers as assistants. In the British service he also is charged with the custody of all prisoners in the cells.

Prowess. Valor; bravery in the field; military gallantry.

Prowlers. Are persons who steal within the lines of a hostile army for the purpose of robbing, killing; or destroying bridges, roads, mails, or other means of communication. Such persons are not entitled to the privileges usually accorded to prisoners of war.

Prussia. A kingdom of the new German empire. The people of Prussia first appear in history in the 10th century, under the name of Borussi; from these the country derives its name. Some historians, however, derive the name from *Po*, signifying near, and *Russia*. The Prussians were subjected by Boleslaus of Poland in 1018; they made a successful stand against Boleslaus IV. of Poland in 1161, and for a time maintained a rude and savage kind of independence. The Teutonic Knights were engaged in war for half a century with the people,—winning lands and souls by hard fighting,—until at length, in 1283, they found themselves undisputed masters of the country, having almost exterminated the pagan population. During this period the knights founded many cities and repopulated the country with German colonists. In 1454 the municipal and noble classes, with the co-operation of Poland, rose in open rebellion against the knights, who were forced to cede West Prussia and Ermland to Poland. Albert (or Albrecht) of Brandenburg was acknowledged duke of East Prussia in 1525; his son-in-law, John Sigismund, created elector of Brandenburg and duke of Prussia in 1608. The reign of John Sigismund's successor, Georg-Wilhelm (1619-1640), was distracted by the miseries of the Thirty Years' War, and the country was alternately the prey of Swedish and imperial armies. The electorate was raised by the genius of Frederick William, the great elector, to the rank of a great European power. His successor, Frederick III. (1688-1713), was proclaimed king of Prussia by the title of Frederick I. in 1701. During the reign of Frederick William IV., Prussia co-operated powerfully in putting down the insurrections in Poland and Baden. In the war of the Schleswig-Holstein duchies, the Prussians acted in concert with the disaffected against their sovereign, the king of Denmark, occupying the ducal provinces in the name and on behalf of the diet. A treaty of peace was concluded between Prussia and Denmark, on July 2, 1850. In 1863 the allied Prussian and Austrian armies entered the duchies of Schleswig-Holstein and de-

feated the Danes; the duchies were separated from Denmark. Wara disputes with Austria respecting Schleswig-Holstein arose in the beginning of 1866. The vote of the majority of the diet of the Germanic Confederation supported Austria; Prussia announced her withdrawal from the confederation, and its dissolution; the diet declared itself indissoluble, and continued its functions, June 14, 1866. War was declared by Prussia, June 18, 1866, which ended in the total defeat of Austria and her allies. A treaty of peace between Austria and Prussia was signed at Prague on August 23, 1866. By its articles Austria consented to the breaking up of the Germanic Confederation, and to Prussia's annexing Hanover, Hesse-Cassel, Nassau, and Frankfort-on-the-Main, and gave up Holstein and her political influence in North Germany. For further history, see FRANCO-PRUSSIAN WAR.

Pruth. A river of Europe, which rises in the Carpathian Mountains. It forms a portion of the boundary-line between Russia and Turkey, and by crossing it, in 1853, the Russians gave rise to the war with Turkey and the subsequent Crimean war.

Pailoi. Among the Greeks, were light-armed men who fought with arrows and darts, or stones and slings, but were unfit for close fight. They were in honor and dignity inferior to the heavy-armed soldiers.

Publish. To make known. In a garrison orders are published by being read at parade. Orders are also published by circulating written copies.

Puebla, or La Puebla de los Angeles. Capital of the department of Puebla, in Mexico, 80 miles southeast from the city of Mexico. It was taken by the French on May 17, 1863, after a siege of several weeks' duration, the Mexican general Ortega, with 13,000 men, surrendering to Gen. Forey. This event threw open the road to Mexico, and was the immediate precursor of the overthrow of the government of Juarez.

Pueblo Indians (Sp. *pueblo*, "village"). An interesting class of semi-civilized Indians in New Mexico and Arizona, so called from their remarkable residences, a description of some of which may be found under MOQUIS INDIANS. They are divided into several tribes speaking different languages. Their internal administration is patriarchal, each pueblo or village being ruled by its governor and council of three elders.

Pulk. A tribe; a particular body of men. This word is chiefly used in Russia; as, a pulk of Cossacks.

Pultowa. See POLTAVA.

Pultusk. A town of Poland in the government of Plock, situated on the Narew, 85 miles north-northeast from Warsaw. Here on December 26, 1806, was fought one of the battles of the campaign of Eylau, between the Russians and the French. The field was most obstinately contested, but the victory, which, however, was claimed by both armies, inclined in favor of the French.

Pummel. The hilt of a sword, the end of a gun, etc.

Puncto. The point in fencing.

Punic Wars. The name of three celebrated contests, in which the Romans and Carthaginians were engaged from the year 264 to 146 B.C., and which finally terminated with the destruction of Carthage. It was in the second war, which began in 218, that the Carthaginian commander Hannibal rendered himself so distinguished by his victories over the Romans. The illustrious Scipio was eventually the conqueror of Hannibal and the victor of Carthage. *Punic faith* is a reproachful term in frequent use, derived from *Punic*, or Carthaginians, because they were considered by the Romans a perfidious race.

Punishment, Military. In a military sense, is the execution of a sentence pronounced by a court-martial upon any delinquent. The Romans punished crimes committed by the soldiery with the utmost rigor. On the occurrence of a mutiny, every tenth, twentieth, or hundredth man was sometimes chosen by lot, but generally only the ring-leaders were selected for punishment. Deserters and seditious persons were frequently, after being scourged, sold for slaves; and occasionally the offender was made to lose his right hand, or was bled nearly to death. Among the nations of Western Europe, the punishments for military offenses were, till lately, no less severe than they were among the Romans. Besides the infliction of a certain number of lashes with cords, soldiers convicted of theft, marauding, or any other breach of discipline which was not punishable with death, were sentenced to run the gantlope. (See GANTLOPE.) In Russia the knout was extensively used. (See KNOUT.) It is often necessary to punish to maintain discipline, and the rules and articles of war provide ample means of punishment, but not sufficient rewards and guards against errors of judgment. In the French army degrading punishments are illegal, but soldiers may be confined to quarters or deprived of the liberty of leaving the garrison; confined in the guard-room, in prison, or in dungeon; required to walk or to perform hard labor; and officers may be subjected to simple or rigorous arrests. Every officer who inflicts a punishment, must account for it to his superior, who approves or disapproves, confirms, augments, or diminishes it. If an inferior is confined to the guard-room, he cannot be liberated except upon application to a superior. Any officer who has been subjected to punishment, must, when relieved, make a visit to him who ordered it. The French code has, in a word, been careful to provide for both the security of its citizens and the strength of authority. The punishments established by law or custom for U. S. soldiers by sentence of court-martial, are embodied in the Articles of War. (See APPENDIX, ARTICLES OF WAR.) It is regarded as inhuman to punish by soli-

tary confinement, or confinement on bread and water exceeding fourteen days at a time, or for more than eighty-four days in a year, at intervals of fourteen days.

Punits. A town of Prussia in the province of Posen. A battle was fought here in 1706, between the Saxons and the Swedes, in which the latter were victorious.

Punjab, or Five Rivers. An extensive river of Hindostan, situated chiefly in the province of Lahore, but including Moulton, and comprising the country traversed by the "five great waters," or rivers, of which the Indus is the most westerly, and the Sutlej the most easterly. This region was traversed by Alexander the Great in 327 B.C.; and again by Tamerlane in 1398. The wars with the Sikhs began here on March 29, 1849, when the Punjab was annexed to the British possessions in India.

Punkah. A swinging fan used in the hot districts of India.

Purchasing. Any person purchasing from any soldier his arms, uniform, clothing, or any part thereof, may be punished by any civil court having cognizance of the same, by fine in any sum not exceeding \$300, or by imprisonment not exceeding one year.—*Act of March 16, 1802.*

Purple. In heraldry, the color purple, expressed in engravings by lines in bend sinister. It is of unfrequent occurrence in British heraldry.

Pursuit. The act of following or going after; a following with haste, either for sport or hostility; as, the pursuit of an enemy.

Pursuivant. The third and lowest order of heraldic officers. The office was instituted as a novitiate, or state of probation, through which the offices of herald and king-at-arms were ordinarily to be attained, though it has been held that a herald or king-at-arms may be made *per saltum*. For the present titles of the several British pursuivants, see **HERALD**. In ancient times any great nobleman might institute his own pursuivant with his own hands and by his single authority. The dukes of Norfolk had a pursuivant called *Blanch-lyon*, from the white lion in their arms; the pursuivant of the dukes of Northumberland was styled *Esperance* from the Percy motto, and Richard Nevil, earl of Salisbury, had a pursuivant called *Egle vert*.

Purveyor. A person employed to make purchases, or to provide food, medicines, and necessities for the sick.

Push. To press against with force; to drive or impel by pressure; as, to push back an enemy.

Push. An assault or attack; a forcible onset; a vigorous effort.

Put to the Sword, To. To kill with the sword; to slay.

Puteoli (the modern Puzzuoli). A celebrated seaport town of Campania, was situated on the eastern shore of the Gulf of Baie. A colony from the neighboring Greek

city of Cumæ founded it in 521 B.C., under the name of Dicearchia. In the second Punic war the Romans fortified it, and changed its name into that of Puteoli. It was destroyed by Alaric in 410, by Genseric in 455, and also by Totila in 545, but was on each occasion speedily rebuilt. In the 9th century the Lombard dukes of Benevento reduced it.

Putteala. A town of British India, capital of a dependant native state of the same name, in Sirhind, on the Kosilla, 1023 miles northwest of Calcutta. It was taken possession of by the British in 1809, but the rajah retains the sovereignty, on condition of furnishing a certain number of troops in case of war to the British government.

Puzzuoli, or Pozzuoli. See **PUTEOLI**.

Pydna (now Kitron). A town of Macedonia, in the district Pieria, was situated at a small distance west of the Thermaic Gulf, on which it had a harbor. It was originally a Greek colony, but was subdued by the Macedonian kings, from whom, however, it frequently revolted. Toward the end of the Peloponnesian war it was taken after a long siege by Archelaus. It again revolted from the Macedonians, and was subdued by Philip, who enlarged and fortified the place. It was here that Olympias sustained a long siege against Cassander, 317-16 B.C. It is especially memorable on account of the victory gained under its walls by Æmilius Paulus over Perseus, the last king of Macedonia, 168 B.C.

Pylos, or Pilus. In the southwest of Messenia, was situated at the foot of Mount Ægaleos on a promontory at the northern entrance of the basin, now called the Bay of Navarino; the largest and safest harbor of Greece. In the second Messenian war the inhabitants of Pylos offered a long and brave resistance to the Spartans; but after the capture of Ira, they were obliged to quit their native country with the rest of the Messenians. It again became memorable in the Peloponnesian war, when the Athenians under Demosthenes built a fort on the promontory Coryphasium, a little south of the ancient city, and just within the northern entrance of the harbor (425 B.C.). The attempts of the Spartans to dislodge the Athenians proved unavailing; and the capture by Cleon of the Spartans, who had landed in the island of Sphacteria, was one of the most important events in the whole war.

Pyramids, Battle of the. So called from having taken place close to the large pyramids in the plain of Mummies, at Waddam, within a few miles of Grand Cairo. A previous engagement had been fought on July 15, 1799, between the Mamelukes under Murad Bey and the French army, commanded by Bonaparte in person. On July 21, 1799, the second battle, called the "battle of the Pyramids," was fought, when Bonaparte defeated the Mamelukes under Murad Bey and thus subdued Lower Egypt.

Pyrenees, Battle of the. The Pyrenees

are a chain of mountains which separate Spain from France, and are nearly 75 miles broad. Towards the close of the Peninsular war, in 1813, these mountains were the scene of many severe conflicts between the British troops under the Duke of Wellington and the French forces under Marshal Soult. After the defeat of Joseph Bonaparte at Vittoria, Soult took the command of the French armies as *lieutenant de l'empereur*; and after addressing the beaten soldiery in language that proved fatally unpropitious, he hastened to relieve the beleaguered fortresses, and the result was "the battles of the Pyrenees." Pampeluna, Roncesvalles, Maya, Orthez, etc., were the seats of the principal struggles. For nine days the armies had been in each other's presence; and in severe operations and desperate fighting these days were unexampled. The allied casualties exceeded 7000 men,—and those of the French might be safely set down at 15,000.

Pyrgi. Movable towers, used by the Greeks in scaling the walls of besieged towns. They were driven forward upon wheels, and were divided into different stories, capable of carrying a great number of soldiers and military engines.

Pyroboli. Fireballs, used both by the Greeks and Romans. They seem to have been the very same as the *malleoli*.

Pyrometer. An instrument for determining the pressure of fired gunpowder by the registered compression of oil,—invented by Dr. W. E. Woodbridge, and used by him and Maj. Mordecai (U. S. Ordnance Department) in experiments at Washington Arsenal, 1854-55. It consists of a small hollow steel cylinder filled with oil and a piston which is pressed inwards upon the oil by the powder gases. The piston has a small stem projecting inwards, which is guided by a tube in the bottom of the cylinder. A steel point presses against the stem and scratches a line upon it, when the piston is moved. The pyrometer is received by a hollow screw-plug placed in the side of the gun at the point where the pressure is to be taken. This instrument is probably the most accurate and delicate one ever invented for the purpose. In the experiments it recorded certain vibrations in the column of gases, which have been generally neglected by theorists on the subject, but which are of great importance to the life of the gun. It seems unfortunate that an instrument which promised so much should have been allowed to fall into disuse, if not almost oblivion.

Pyrotechny. Is the art of preparing ammunition and fireworks for military and ornamental purposes. (See **AMMUNITION**.) Military fireworks comprise preparations for the service of *cannon ammunition*, and for *signal, light, incendiary, and defensive and offensive purposes*. The term composition is applied to all mechanical mixtures which, by combustion, produce the effects sought to be attained in pyrotechny. The preparations for the service of ammunition

are *slow-match, quick-match, port-fires, friction-tubes, and fuzes*.

Slow-match is used to preserve fire. It may be made of hemp or cotton rope; if made of hemp, the rope is saturated with acetate of lead, or the lye of wood-ashes; if made of cotton, it is only necessary that the strands be well twisted. Slow-match burns from 4 to 5 inches in an hour.

Quick-match is made of cotton-yarn (candle-wick) saturated with a composition of meal powder and gummed spirits; after saturation, the yarn is wound on a reel, sprinkled (dredged) with meal powder and left to dry. It is used to communicate fire, and burns at the rate of one yard in thirteen seconds. The rate of burning may be much increased by inclosing it in a thin paper tube called a *leader*.

Port-fire is a paper case containing a composition, the flame of which is capable of quickly igniting primers, quick-match, etc. A port-fire is about 22 inches long, and burns with an intense flame for ten minutes.

Friction-tube is at present the principal preparation for firing cannon; it has the advantage of portability and certainty of fire. It is composed of two brass tubes soldered at right angles. The upper, or short tube contains a charge of friction-powder, and the *roughed* extremity of a wire loop, the long tube is filled with rifle-powder, and is inserted in the vent of the piece. When the extremity of the loop is violently pulled by means of a lanyard, through its hole in the long tube, sufficient heat is generated to ignite the friction-powder which surrounds it, and this communicates with the grained powder in the long tube. The charge of grained powder has sufficient force to pass through the longest vent, and penetrate several thicknesses of cartridge-cloth.

Fuzes.—See **FUZZ**.

Fireworks for Signals.—The preparations for signals are *rockets* and *blue-lights*.

Signal-Rockets.—The principal parts of a signal-rocket are the *case*, the *composition*, the *pot*, the *decorations*, and the *stick*. The *case* is made by rolling stout paper around a former. The vent is formed by choking one end of the case.

Composition.—A variety of compositions are employed for signal-rockets; a mixture of nitre 12 parts, sulphur 2 parts, charcoal 2 parts, is frequently used. The *pot* is formed of a paper cylinder, slipped over and pasted to the top of the case; it is surmounted with a paper cone, filled with tow. The object of the pot is to contain the decorations which are scattered through the air by the explosion which takes place when the rocket reaches the summit of its trajectory; the explosion is produced by a small charge of meal powder. The *decorations* of rockets are *stars, serpents, marrons, gold rain, rain of fire, etc.*

Stars.—The compositions for stars are, for *white*: nitre 7 parts, sulphur 8 parts, meal powder 2 parts; for *red*: chlorate of potassa

7 parts, sulphur 4 parts, lampblack 1 part, nitrate of strontia 12 parts; *blue*: chlorate of potassa 8 parts, sulphur 1 part, ammoniacal sulphate of copper 1 part; *yellow*: chlorate of potassa 4 parts, sulphur 2 parts, sulphate of strontia 1 part, bicarbonate of soda 1 part.

Serpents.—The case of a serpent is similar to that of a rocket; the composition is driven in, and the top is closed with moist plaster of Paris. The composition is nitre 8 parts, sulphur 8 parts, meal powder 16 parts, charcoal $\frac{1}{2}$ part.

Marrons.—Marrons are small paper shells, or cubes, filled with grained powder, and primed with a short piece of quick-match.

Stick.—The stick is a tapering piece of pine, about nine times the length of the case.

Blue Light.—A very brilliant bluish light may be made of the following ingredients, viz.: nitre 14 parts, sulphur 8.7 parts, realgar 1 part, meal powder 1 part; the brilliancy depends on the purity and thorough incorporation of the ingredients.

Incendiary Fireworks.—Incendiary preparations are *fire-stone*, *carcasses*, *incendiary-match*, and *hot shot*.

Fire-stone is a composition that burns slowly, but intensely; it is placed in a shell, along with the bursting charge, for the purpose of setting fire to ships, buildings, etc. It is composed of nitre 10 parts, sulphur 4 parts, antimony 1 part, rosin 8 parts.

Carcass.—A common shell may be loaded as a carcass by placing the bursting charge at the bottom of the cavity, and covering it with carcass composition, driven in until the shell is nearly full, and then inserting four or five strands of quick-match. This projectile, after burning as a carcass, explodes as a shell. See *CARCASS*.

Incendiary-match.—Is made by boiling slow-match in a saturated solution of nitre, drying it, cutting it into pieces, and plunging it into melted fire-stone. It is principally used in loaded shells.

Hot Shot.—See *HOT SHOT*.

Fireworks for Light.—The preparations for producing light are *fire-balls*, *light-balls*, *tarred-links*, *pitched-fascines*, and *torches*.

Fire-ball.—A fire-ball is an oval-shaped canvas sack filled with combustible composition. It is intended to be thrown from a mortar to light up the works of an enemy, and is loaded with a shell to prevent it from being approached and extinguished. The composition for a fire-ball consists of nitre 8 parts, sulphur 2 parts, antimony 1 part. The bottom of the sack is protected from the force of the charge by an iron cup called a culob, and the whole is covered and strengthened with a net-work of spun-yarn or wire, and then overlaid with a composition of pitch, rosin, etc.

Light-ball.—These are made in the same manner as fire-balls, the shell being omitted.

Tarred-links.—Tarred links are used for lighting up a rampart, defile, etc., or for incendiary purposes. They consist of coils of

soft rope placed on top of each other, and loosely tied together; they are immersed in a composition of 20 parts of pitch, and one of tallow; when dry, they are plunged into a composition of equal parts of pitch and rosin, and rolled in tow or sawdust.

Pitched-fascines.—Fagots of vine twigs or other very combustible wood, about 20 inches long and 4 inches in diameter, tied in three places with iron wire. They may be treated in the same manner and used for the same purposes as tarred-links.

Torches.—A torch is a ball of rope impregnated with an inflammable composition, and is fastened to the end of a stick, which is carried in the hand.

Offensive and Defensive Fireworks.—The principal preparations of this class, employed in modern warfare, are *bags of powder* and *light-barrels*.

Bags of Powder.—Bags or cases of powder may be used to blow down gates, stockades, or form breaches in thin walls. The petard was formerly employed for these purposes, but it is now generally thrown aside. The effect of the explosion may be much increased by making three sides of the bag of leather, and the fourth of canvas, which should rest against the object.

Light-barrel.—A light barrel is a common powder barrel pierced with numerous holes, and filled with shavings that have been soaked in a composition of pitch and rosin; it serves to light up a breach, or the bottom of a ditch.

Fireworks.—Ornamental fireworks are divided into fixed pieces, movable pieces, decorative pieces, and preparations for communicating fire from one part of a piece to another. The different effects are produced by modifying the proportions of the ingredients of the burning composition, so as to quicken or retard combustion, or by introducing substances that give color and brilliancy to the flame. The fixed pieces are *lances*, *petards*, *gerbes*, *flames*, etc.

Lances.—These are small paper tubes filled with a composition which emits a brilliant light in burning. See *LANCER A FEU*.

Petard.—Petards are small paper cartridges filled with powder.

Gerbe.—Gerbes are strong paper tubes or cases filled with a burning composition. The ends are tamped with moist plaster of Paris or clay. The movable pieces are *sky-rockets*, *tourbillions*, *Saxons*, *jets*, *Roman candles*, *paper shells*, etc.

Sky-rocket.—Sky-rockets are the same as the signal-rockets before described, except that the composition is arranged to give out a more brilliant train of fire. Composition: 122 parts meal powder, 80 parts nitre, 40 parts sulphur, and 40 parts cast-iron filings.

Tourbillion.—The tourbillion is a case filled with sky-rocket composition, and which moves with an upward spiral motion.

Saxon.—The Saxon is similar to the tourbillion; it has the appearance of a revolving sun.

Jets.—Jets are rocket-cases filled with a burning composition; they are attached to the circumference of a wheel, or the end of a movable arm, to set it in motion.

Roman candles.—A Roman candle is a strong paper tube containing stars, which are successively thrown out by a small charge of powder placed under each star. A slow-burning composition is placed over each star to prevent its taking fire at once.

Paper Shell.—This piece is a paper shell filled with decorative pieces, and fired from a common mortar. It contains a small bursting charge of powder, and has a fuze regulated to ignite it when the shell reaches the summit of its trajectory.

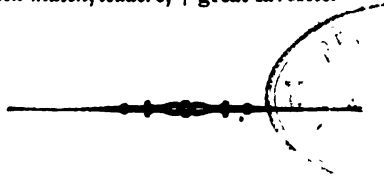
Decorative Pieces.—Decorative pieces are stars, serpents, marrons, etc., described under the head of ROCKETS.

Preparations for communicating fire from one piece to another are quick-match, leaders,

port-fires, and mortar-fuzes. The leader is a thin paper tube containing a strand of quick-match. See QUICK-MATCH, etc.

Pyroxyline, or Pyroxylo. Gun-cotton (which see).

Pyrrhic Dance. The most famous of all the war-dances of antiquity; is said to have received its name from Pyrrhus, or Neoptolemus, the son of Achilles, and was a Doric invention. According to Plato, it aimed to represent the nimble motions of a warrior either avoiding missiles and blows, or assaulting the enemy; and in the Doric states it was as much a piece of military training as an amusement. Elsewhere in Greece, it was purely a mimetic dance, in which the parts were sometimes represented by women. It formed part of the public entertainments at the Panathenaic festivals. Julius Cæsar introduced it at Rome, where it became a great favorite.



Q.

Quadri. A powerful and warlike German tribe, belonging to the Suevic race, whose territories were situated between the Danube, the Bohemian mountains, and the river Marus. They make their first appearance in history in the 1st century as formidable foes of the Romans. Their bodies were covered with mail, consisting of plates of horn; their weapons were long spears; and each man had three swift horses for his use in battle. Thus equipped, they commenced the practice of making rapid and sweeping raids into Pannonia, Mœsia, and other neighboring provinces. Sometimes they routed the imperial forces which tried to check their inroads. At all times they returned home with their predatory spirit unbroken. No reverses in fact, however frequent, could daunt those wild border troopers of the Danube. The emperor Marcus Aurelius, Probus, Carus, and Valentinian I., defeated them without subduing or crushing them. The last glimpse that we get of them in history shows them in company with other barbaric hordes, in 407, overrunning Gaul, and reveling in boundless havoc and slaughter.

Quadrant. An instrument for measuring altitudes, variously constructed and mounted for different specific uses in astronomy, surveying, gunnery, etc., consisting commonly of a graduated arc of 90°, with an index or vernier, and either plain or telescopic sights, together with a plumb-line or spirit-level for fixing the vertical or horizontal direction.

Quadrant, Gunner's. See GUNNER'S QUADRANT.

Quadrat. Or to quadrat a gun, is to see it duly placed on its carriage, and that the wheels be of an equal height.

Quadriga. In antiquity, a car or chariot, drawn by four horses harnessed abreast. This chariot was used in battle and in triumphal processions.

Quadrilateral. In military language, an expression designating a combination of four fortresses, not necessarily connected together, but mutually supporting each other; and from the fact that if one be attacked, the garrisons of the others, unless carefully observed, will harass the besiegers, rendering it necessary that a very large army should be employed to turn the combined position. As a remarkable instance, and a very powerful one, may be cited the celebrated quadrilateral in Venetia, comprising the four strong posts of Mantua, Verona, Peschiera, and Legnago. These form a sort of outwork to the bastion which the southern mountains of the Tyrol constitute, and divide the north plain of the Po into two sections by a most powerful barrier. Napoleon III., in 1859, even after the victories of Magenta and Solferino, hesitated to attack this quadrilateral.

Quadrille (Fr.). Small parties of horse richly caparisoned, etc., in tournaments and at public festivals. The quadrilles were distinguished from one another by the shape or color of the coats which the riders wore.

Quadruple Alliance. Between Great Britain, France, and the emperor of Germany (signed at London, July 22, 1718); it

obtained its name on the accession of the states of Holland, February 8, 1719. It guaranteed the succession of the reigning families of Great Britain and France, settled the partition of the Spanish monarchy, and led to war.

Quadruple Treaty. Concluded in London, April 22, 1834, by the representatives of Great Britain, France, Spain, and Portugal, which guaranteed the possession of her throne to Isabella II., the young queen of Spain.

Quaker-guns (Fr. *passe-volans*). Were wooden pieces of ordnance which were made to resemble real artillery. They subsequently were used in other countries, and placed in the embrasures of forts, in order to deceive an enemy.

Quarrel, or Quarry. An arrow with a square head, for a cross-bow, was so called.

Quarrels. See APPENDIX, ARTICLES OF WAR, 24.

Quarte. In tactics, a word of command given in the bayonet exercise; as, *quarte parry*, to thrust in quarte.

Quarter. A fourth part of anything.

Quarter. To furnish with shelter or entertainment; to supply with the means of living for a time; especially to furnish shelter to; as, to quarter soldiers.

Quarter. In heraldry, one of the divisions of a shield, when it is divided into four portions by horizontal and perpendicular lines meeting in the fesse point; especially either of the two divisions thus made. Also, to bear as an appendage to the hereditary arms. "The coat of Beauchamp . . . quartered by the Earl of Hertford."

Quarter. In war, signifies the sparing of the life of a vanquished enemy, which by the laws of war is forfeit to the victor. The expression seems to be derived from the use of the word "quarter" to designate the lodging of the particular warrior; to *give quarter* to a prisoner being to send him to his captor's quarter for liberation, ransom, or slavery. The refusal of quarter is a terrible aggravation of the horrors of war, and is only at all justifiable towards an enemy who has been guilty of atrocious cruelty himself, or of some flagrant breach of faith.

Quarter Arms, To. In heraldry, to place the arms of other families in the compartments of a shield, which is divided into four quarters, the family arms being placed in the first quarter. When more than three other arms are to be quartered with the family arms, it is usual to divide the shield into a suitable number of compartments; and still the arms are said to be *quartered*.

Quarter Guard. The guard which is stationed in front of the centre of the camp of each corps, at about 80 paces from it.

Quarter of Assembly. The place where the troops meet to march from in a body, and is the same as the place of rendezvous.

Quarter Upon, To. Is to oblige persons to receive soldiers, etc., into their dwelling-houses, and to provide for them. In the

United States no soldier shall, in time of peace, be quartered in any house without the consent of the owner; nor in time of war, but in a manner to be prescribed by law.

Quarter-block. See IMPLEMENTS.

Quartering. In heraldry, the division of a shield containing many coats. See QUARTER.

Quarterly. In heraldry, in quarters or quarterings; as, to bear arms quarterly.

Quartermaster. A regimental staff-officer, of the relative rank of lieutenant, whose duty is to look after the assignment of quarters, the provision of clothing, forage, fuel, and all other quartermaster's supplies; and when on the march he sees to the marking out of the camp. He is appointed by the colonel of the regiment, subject to the approval of the Secretary of War. He vacates his staff position when promoted to the rank of captain, or at the discretion of the colonel. In the British service the regimental quartermaster rises, with scarcely any exception, from the ranks. He has no further promotion to look forward to; but after thirty years' service in all—including ten as an officer—he may retire with the honorary rank of captain.

Quartermaster-General. A staff-officer in the U. S. army, who has the rank of brigadier-general, and is at the head of the quartermaster's department.

Quartermaster's Department. This department provides the quarters and transportation of the army, except that, when practicable, wagons and their equipment are provided by the ordnance department; storage and transportation for all army supplies; army clothing; camp and garrison equipage; cavalry and artillery horses; fuel, forage, straw, and stationery. The incidental expenses of the army (also paid through the quartermaster's department) include per diem to extra-duty men; of the pursuit and apprehension of deserters; of the burials of officers and soldiers; of hired escorts; of expresses, interpreters, spies, and guides; medicines for horses; and of supplying posts with water; and, generally, the proper and authorized expenses for the movements and operations of an army not expressly assigned to any other department. The present organization of the quartermaster's department consists of 1 quartermaster-general, with the rank of brigadier-general; 8 assistant quartermaster-generals, with the rank of colonels; 8 deputy quartermaster-generals, with the rank of lieutenant-colonels; 14 quartermasters, with the rank of majors; and 80 assistant quartermasters, with the rank of captains.

Quartermaster-Sergeant. A non-commissioned officer who assists the quartermaster. He ranks among the regimental non-commissioned staff, and is appointed by the colonel of a regiment upon the recommendation of the quartermaster.

Quarters. In military affairs, are, gen-

erally, the positions assigned to persons or bodies of men. In a more special sense, the quarters in the army are the places of lodging assigned to officers or men when not actually on duty.

Quarters. The encampment on one of the principal passages round a place besieged, to prevent relief and intercept convoys.

Quarters, Choice of. In the U. S. service, when officers arrive in a garrison they shall have choice of quarters according to rank; but the commanding officer may direct the officers to be stationed near their troops. The commanding officer of a post cannot be displaced by his senior who does not command, though assigned to the same post. An officer who has made his choice of quarters cannot again displace a junior, unless himself displaced by a senior.

Quarters, Intrenched. A place fortified with a ditch and parapet to secure a body of troops.

Quarters of Refreshment. The place where the troops that have been much harassed are put to recover themselves, during some part of the campaign.

Quarters, Out of. Beyond the prescribed limits. For punishment of soldiers sleeping out of quarters, see APPENDIX, ARTICLES OF WAR, 81.

Quarter-sights. In gunnery, are divisions marked on the upper quarters of the base-ring, commencing where it would be intersected by a plane parallel to the axis of the piece, and tangent to the upper surface of the trunnions. These sights are used for giving elevations up to three degrees; but especially for pointing a piece at a less elevation than the natural angle of sight. Quarter-sights are not used in the U. S. service.

Quarter-staff. Formerly a favorite weapon with the English for hand-to-hand encounters; was a stout pole of heavy wood, about 6½ feet long, shod with iron on both ends. It was grasped in the middle by one hand, and the attack was made by giving it a rapid circular motion, which brought the loaded ends on the adversary at unexpected points.

Quasi Officers. See SURGEONS, ACTING-ASSISTANT.

Quatre Bras. See WATERLOO.

Quatrefoil. A heraldic bearing meant to represent a flower with four leaves. It is not represented with a stalk unless blazoned as *slipped*, in which case the stalk joins the lower leaf.

Quebec. The capital of the province of Quebec, formerly Canada East, is situated on a steep promontory at the junction of the rivers St. Lawrence and St. Charles, and its citadel is the most impregnable fortress on the continent of America. The site of Quebec, originally occupied by an Indian village named Stadacona, was discovered by Jacques Cartier in 1535; but the city was founded by Champlain in 1608. It was

taken from the French by the English in 1626, restored in 1682, and fortified in 1690. It remained in the possession of the French till 1759, when in consequence of the victory of Wolfe, it was surrendered to the British, and finally confirmed to them by the treaty of Paris in 1763. Quebec was attacked by the American republicans in 1775, but the siege was raised in the following year. Since then its capture has not been attempted.

Queen Anne's Pocket-piece. An ancient 18-pounder cannon at Dover, England. See ORDNANCE, HISTORY OF.

Queen's Color. In the British service, the one which is carried on the right of the two colors of a battalion of infantry. It is, in the line, the great union or union-jack, with the imperial crown in the centre and the number of the regiment in gold Roman characters below the crown. In the Guards the queen's color is crimson, with various devices on it.

Queen's County. An inland county of the province of Leinster, Ireland. Queen's County anciently formed part of the districts of Leix and Ossory; and after the English invasion, on the submission of the chief O'More, the territory retained a qualified independence. Under Edward II., the O'Mores became so powerful, that for a long series of years an unceasing contest was maintained by them with the English, with various alternations of success. In the reign of Edward VI., Bellingham, the lord-deputy, succeeded in re-annexing the territory of the O'Mores to the Pale; and in Mary's reign it was reduced to a shire.

Queenstown. A town of Upper Canada. It was taken by the U. S. troops October 18, 1812; but was retaken by the British forces, who defeated the Americans with considerable loss in killed, wounded, and prisoners, on the same day. Queenstown suffered severely in this war.

Quell. To crush; to subdue; to put down; to reduce; as, the military were called out to quell the riot.

Quentin, Saint-. See SAINT-QUENTIN.

Queretaro. An important town of Mexico, capital of a state of the same name, situated on a hilly plateau, 110 miles northwest of the city of Mexico. The peace between Mexico and the United States was ratified here by the Mexican congress in 1848. The town was besieged and taken (through the treachery of Lopez) by the Liberal general Escobedo, May 15, 1867. The emperor Maximilian, and his generals Miramon and Mejia, were taken prisoners, and after trial, were shot on June 19 following.

Quesnoy. A fortified town of France, in the department of Nord. It was taken by the Austrians, September 11, 1793, but was recovered by the French, August 16, 1794. It surrendered to Prince Frederick of the Netherlands, June 29, 1815, after the battle of Waterloo.

Queue. A tail-like twist of hair formerly worn at the back of the head by soldiers.

Queues d'Hirondelle (Fr.). In fortification, lines composed of projecting tenailles, or works, which, from the facility with which an enemy can enfilade their long branches, are considered extremely defective, and consequently are seldom employed.

Quiberon. A town of France, in the department of Morbihan, situated on a long and narrow peninsula of the same name, which, with some islands, forms one of the largest bays in Europe, 20 miles southwest from Vannes. A body of French emigrant royalists, under D'Hervilly and Puisaye, landed here from an English fleet, on June 27, 1795, and endeavored to rouse the people of Brittany and La Vendée against the Convention, but were defeated, in July, and driven into the sea by Gen. Hoche. A large number of prisoners taken were shot, by order of the Convention. During the war of the Austrian Succession, an English force attempted a landing here (1746), but was repulsed.

Qui Vive? Qui va La? Qui est La? (Fr.) Literally means, Who is alive? Who goes there? and Who is there? These terms are used by the French sentinels when they challenge, and are equivalent to the English challenge, Who comes there?

Quick Time. In tactics, the length of the direct step in quick time is 28 inches, measured from heel to heel; the cadence is at the rate of 110 steps per minute, or 2 miles 1618 yards in an hour.

Quick-match. See LABORATORY STORES.

Quickstep. A lively, spirited march generally played by military bands.

Quiloa, or Keelwa. A seaport town of Zanguebar, on the east coast of Africa, 225 miles north of Mozambique. It was taken and burned by the Portuguese, in 1506, but abandoned by them soon after.

Quincunx. Forming a body of men checkerwise.

Quintain, or Quintin. An instrument used in the ancient practice of tilting. It consisted of an upright post, on the top of which a cross post turned upon a pivot; at one end of the cross post was a broad board, and at the other a bag of sand. The practice was to ride against the board with a lance, at such speed as to pass by before the sand-bag could strike the tilter on the back.

Quinte. The fifth guard in fencing.

Quirites. In ancient Rome the citizens were so called as distinguished from the soldiery.

Quischens. The old term for *cuisse*s, the pieces of armor which protected the thighs.

Quit. To leave; to abandon. *To quit your post or ranks*, is to retire, without having received any previous order for that purpose, from a station intrusted to your care, or a position in which you may be. For punishment inflicted upon persons quitting their posts, see APPENDIX, ARTICLES OF WAR, 40.

Quiver. A case or sheath for arrows.

Quoin. In gunnery, is a wedge used to lay under the breech of a gun to elevate or depress it.

Quota. A proportional part or share; or the share, part, or proportion assigned to each. "Quota of troops and money."

R.

Raab, or Nagy-Gyor. A town of Hungary, 67 miles west-northwest of Buda. A battle was fought under its walls in June, 1809, in which Napoleon totally defeated the disorderly force of the Hungarian nobles.

Rabinet. A small piece of ordnance formerly in use. It weighed but 800 pounds, and fired a small ball of 1½ inch diameter; with a very limited range.

Rachat des Cloches (Fr.). Redemption of bells. Formerly in France when a fortified place was taken, the bells became the property of the master-general of artillery, which were usually redeemed by the inhabitants at a certain price; it was necessary that the place should be attacked by artillery in order to secure this right over the bells.

Rack, Forage. See ORDNANCE, CARRIAGES FOR, BATTERY-WAGON.

Rack-stick and Lashing. Consist of a piece of two-inch rope, about 6 feet long, fastened to a picket about 15 inches long, having a hole in its head to receive the rope. Rack lashings are used for securing the planks of a gun or mortar platform, between the ribbons and the sleepers.

Radius. In fortification, a term applied to a line drawn from the centre of the polygon to the extremity of the exterior side. There are the *exterior*, the *interior*, and the *right radii*.

Radstadt. See RASTADT.

Raft. A species of floating bridge for the passage of rivers, on which the soldiers and light artillery may be safely conveyed.

Raft of Casks. This raft may be constructed by forming a frame of timber to contain the casks.

The frame consists of four longitudinal

pieces halved into four transoms. The long pieces must be at least 20 feet long, and their distance apart be a little less than the head diameter of the casks. The under edges are beveled so as to give them a good bearing on the casks.

In default of square timber, poles may be used in the construction of the frame. The string-pieces and transoms may be spiked or lashed at their points of junction.

The four exterior casks in the raft should be lashed to the frame, otherwise they may be carried off by the current when the raft lurches. For other kinds of rafts, see **PONTONS**.

Raft, Prairie. See **PONTONS**.

Rafts, Timber. Employ the largest and longest timber, giving at least 35 feet length to the raft. Shorter than this it will not have sufficient stability, but will be subject to dangerous oscillations, especially in a rapid stream. Squaring the timber will be worse than useless. Any irregularities, such as branches and knots, should be trimmed off. The raft must be built in the water. Select a place where there is little current, and where the bank slopes gently to the water.

The timber is then arranged in the position it is to have in the raft,—the butts alternately up and down the stream,—the up-stream ends forming a right angle, salient up-stream.

Suppose the case of a raft to be composed of 20 logs, 47 feet long, and averaging 12 inches in diameter.

The first log is brought alongside the shore, and the end of a plank or small trunk of a tree is spiked to it, about 8 feet from each end; it is pushed off a little, and a second log is brought up, under the transoms and in close contact with the first.

The second log is spiked like the first, and so on for each of the remaining logs; care being taken to alternate the butts, placing the whistle ends up-stream with the bevel underneath, and to spike the transoms perpendicular to the logs. When the current of the river in which the raft is to be used is very gentle, the up-stream ends may be on a line parallel to the transom; but if rapid, they should form a right-angle salient up-stream, the vertex being in the middle log.

When the bank is too steep to admit of this construction, the trees may be floated into their proper positions, lashed together, and the transoms spiked on; if the logs are nearly of the same size, the centre of gravity will be near the centre of the raft.

Two additional transoms are spiked at equal distances from the centre of gravity of the raft, and at a distance apart equal to the width of the roadway or platform.

The transoms should be about 8 inches wide by 6 inches thick, and should have a bearing on all the logs forming the raft. When a platform is to be constructed on the raft, intermediate transoms are laid, and at a distance apart depending on the strength

of the planking. The size of the platform must be regulated by the buoyant power of the raft. A single course of logs will not have sufficient power to sustain troops enough to cover its whole surface. When the raft is to be used in a bridge the two intermediate transoms are separated by a distance a little less than the length of the chess, and placed at equal distances from a point somewhat astern of the centre of gravity of the raft, in order to correct the downward action of the cable on the bow.

For use in a bridge, a raft should be able to sustain at least 15,000 pounds. The same expedients are employed for the anchorage of rafts as boats.

Rafts are sometimes constructed for flying-bridges in the form of a lozenge, the acute angles being about 55°,—so that when two of the sides are parallel to the action of the current, the up-stream side, which in this form is the only one acted on by the current, is in the most favorable position.

Raguled, or Ragguld. In heraldry, jagged or notched in an irregular manner.

Raguled, Cross. One made of two trunks of trees without their branches, of which only the stumps appear.

Raguly. In heraldry, a term applied to an ordinary whose bounding lines are furnished with serrated projections.

Ragusa. A town of Austria, formerly the capital of an independent republic which now forms part of the kingdom of Dalmatia, on a peninsula on the east side of the Adriatic, and built in terraces on the side of Mount Sergio, the upper streets communicating with the lower by a flight of steps. It is strongly fortified with citadels, forts, and walls. It was taken by the Venetians in 1171, but became an independent republic, 1358; was taken by the French in 1806, and given up to Austria in 1814.

Rahmanieh. A town of Lower Egypt, situated at the junction of the Nile with the canal of Alexandria, 25 miles southeast from Rosetta. The French, during their occupation of Egypt, made it a fortified station. It was taken from them by the British in 1801.

Raid. A hostile or predatory incursion, especially an inroad or incursion of mounted men; a sudden and rapid invasion by a cavalry force.

Raillon (Fr.). A quarrel; a short arrow.

Rail-platform. See **PLATFORM**.

Rails. See **ORDNANCE, CARRIAGES FOR, SEA-COAST CARRIAGES**.

Rain, or Rhain. A town of Bavaria, 22 miles north from Augsburg, where the Austrian general Tilly received his mortal wound in 1632.

Raise. Armies are *raised* in two ways: either by voluntary engagements, or by lot or conscription. The Greek and Roman levies were the result of a rigid system of conscription. The Visigoths practiced a general conscription; poverty, old age, and

sickness, were the only reasons admitted for exemption. "Subsequently" (says Hallam), "the feudal military tenures had superseded that earlier system of public defense, which called upon every man, and especially upon every land-holder, to protect his country. The relations of a vassal came in place of those of a subject and a citizen. This was the revolution of the 9th century. In the 12th and 18th another innovation rather more gradually prevailed, and marks the third period in the military history of Europe. Mercenary troops were substituted for the feudal militia. These military adventurers played a more remarkable part in Italy than in France, though not a little troublesome to the latter country." A necessary effect of the formation of mercenaries was the centralization of authority. Money became the sinews of war. The invention of fire-arms caused it to be acknowledged that skill was no less essential for warlike operations than strength and valor. Towards the end of the Middle Ages, the power of princes was calculated by the number and quality of paid troops they could support. France first set the example of keeping troops in peace. Charles VII., foreseeing the danger of invasion, authorized the assemblage of armed mercenaries called *compagnies d'ordonnance*. Louis XI. dismissed these troops but enrolled new ones, composed of French, Swiss, and Scotch. Under Charles VIII., Germans were admitted in the French army, and the highest and most illustrious nobles of France regarded it as an honor to serve in the *gens d'armes*. Moral qualifications not being exacted for admission to the ranks, the restraints of a barbarous discipline became necessary, and this discipline divided widely the soldier from the people. The French revolution overturned this system. "Now" (says Decker) "mercenary troops have completely disappeared from continental Europe. England only now raises armies by the system of *recruiters*. The last wars of Europe have been wars of the people, and have been fought by nationalities. After peace armies remain national, for their elements are taken from the people by legal liberations. The institution of conscription is evidently the most important of modern times. Among other advantages, it has bridged the otherwise impassable gulf between the citizen and soldier, who, children of the same family, are now united in defense of their country. Permanent armies have ceased to be the personal guard of kings, but their sympathies are always with the people, and their just title is that of skillful warriors maintained as a nucleus for the instruction of their countrymen in the highest school of art."

Raise a Blockade, To. To remove or break up a blockade, either by withdrawing the ships or forces employed in enforcing it, or by driving them away or dispersing them.

Raise a Purchase, To. To dispose instruments or machines in such a manner as to exert any mechanical force required.

Raise a Siege, To. To relinquish an attempt to take a place by besieging it, or to cause the attempt to be relinquished.

Rajah, or Raja. A hereditary prince among the Hindus belonging to the warrior caste, or the Kshattriya. In later times it became a title given by the British government to Hindus of rank, and is now not uncommonly assumed by the zemindars, or land-holders; the title of Maharajah, or "great Rajah," being in these days generally reserved to the more or less independent native princes.

Rajpoots, or Rajputs. Is the name of various tribes in India which are of Aryan origin, and either descended from the old royal races of the Hindus, or from their Kshattriya, or warrior caste. They attained a high degree of power and renown just before the Mohammedan conquests in the 12th century. In 1198 and 1194 the Rajpoot chiefs sustained more than one defeat at the hands of the Mohammedans, and were deprived of all their possessions except the regions they now occupy. They came under the protection of the English, from about the beginning of this century, when the Rajpoots proved unable to defend their country against the Mahrattas.

Rake. To enflade; to fire in a direction with the length of; as, to rake the enemy's ranks.

Rally. To bring back to order troops that may have been dispersed, or have retreated in a panic.

Rally. To come into orderly arrangement; to renew order, as troops scattered or put to flight; to assemble; to unite.

Ram. To push home the charge of a gun; also, the corresponding word of command.

Ram, Battering-. See BATTERING-RAM.

Ram Home, To. To drive home the ammunition in a gun.

Ramillies. A village of Brabant, Belgium, 28 miles southeast of Brussels, is memorable as the place near which one of the most important battles of the War of the Spanish Succession was fought, May 23, 1706. In this conflict the French forces were under the command of Marshal de Villeroy and the elector of Bavaria, while the Duke of Marlborough led the troops of the allies. Villeroy, after a battle of three hours and a half, was defeated, with the loss of all his cannon, the whole of his baggage, and 18,000 men in killed and wounded. The great result of this victory was that the French were compelled to give up the whole of the Spanish Netherlands. About 4000 of the allies were slain in the engagement.

Rammer. See IMPLEMENTS, and INSPECTION OF CANNON.

Rammer-head. See IMPLEMENTS, and INSPECTION OF CANNON.

Ramnuggur. A walled town of the Pun-

jab, on the Chenaub, 62 miles northwest of Lahore. Here the Sikh army was defeated by the British, October, 1848.

Ramp. An oblique or sloping interior road to mount the terre-plein of the rampart.

Rampant (*Fr.*, literally, "raging"). In heraldry, an epithet applied to a lion or other beast of prey when placed erect on the two hind-legs, with only one of the fore-legs elevated, the head being seen in profile. When the face is turned toward the spectator, the attitude is called *rampant gardant*, and when the head is turned backwards, *rampant regardant*. A lion *counter-rampant* is one rampant towards the sinister, instead of towards the dexter, the usual attitude. Two lions rampant contrariwise in saltire, are sometimes also said to be *counter-rampant*.

Rampart. To fortify with ramparts.

Rampart-grenades. Grenades used to defend a rampart. Shells of large size may be used, being rolled down the parapet. See **GRENADE**.

Rampart-gun. A large gun fitted for rampart use, and not used for field purposes.

Ramparts. In fortification, are broad embankments or masses of earth which surround fortified places. A rampart forms the *enceinte*, or body of the place, and on its exterior edge the parapet is placed, while towards the place it is terminated by the interior slope of the rampart, on which *ramps* are made for the easy ascent of the troops and material. See **BULWARK**.

Rampier. The same as rampart.

Rampire. The same as rampart,—seldom used except in poetry.

Ramps. Are inclined planes of earth serving as a means of communication between two levels. A ramp for a field-gun is 8 feet wide, and for short distances it has a slope of one-fourth to one-sixth. When the distance is long the slope is increased to as much as one-twelfth.

Ramrod. The rod of iron formerly used in loading a piece to drive home a charge; but now used to clean the rifle.

Ram's Horns. In fortification, a kind of low works made in the ditch of a circular arc, which serves instead of tenailles.

Rancheros (from the Spanish *rancho*, "comradeship"). Is the name given in Mexico to a mixed breed of Spanish and Indian blood, who inhabit the country, and may almost be said to live in the saddle from their youth; are splendid riders and hunters, and form the bravest part of the Mexican army,—its irregular cavalry. The importance of their services was seen in the wars between Mexico and the United States. The *rancheros* are lank in frame, with brown, weather-stained faces and muscular limbs, hardy, temperate, and always ready for the boldest enterprises.

Rancon (*Fr.*). The name of an old weapon, consisting of a long stake with a sharp iron point at one end, and two blades or wings bent backwards, and extremely keen.

Random. Distance to which a missile is thrown or projected; range; reach; as, the farthest random of a missile weapon.

Random Shot. A shot not directed or aimed towards any particular object, or when the piece is elevated at an angle of 45° upon a level plane.

Range. In artillery, is the horizontal distance from the muzzle of the piece to the first graze of the projectile. The extreme range is the distance from the muzzle to where the projectile finally rests. The range of a projectile may be extended without increasing the charge of powder, in the modes, viz.: 1st, by raising the piece to a higher level; 2d, by giving its axis greater elevation; 3d, by *eccentric* projectiles. Experiments have shown that if the centre of gravity be placed directly above the centre of figure, the range is greatly increased. The range increases with the angle of fire up to a certain limit, beyond which it diminishes. The greatest range in *vacuo* is at an angle of 45°. A mortar is usually fired at an angle of 45°, and the charge is varied according to the range required. Mortars are sometimes fired at an angle of 60°, when the battery is situated very near the object assailed, and it is desired that the shells may fall upon the magazines of the besieged. It is evident that the higher projectiles are thrown, the greater the velocity they acquire in falling; besides, they strike the object more directly and with increased violence. Stone-mortars were sometimes fired at an angle of 75°, that, in falling from a great height, the stone might have the maximum force of percussion. Grenades should be thrown from mortars at an angle of 88°; otherwise they will be buried in the earth, and their fragments will not be sufficiently destructive. For tables of ranges, see Roberts's "Hand-book of Artillery."

Range, Point-blank. See **POINT-BLANK RANGE**.

Range-finder. An instrument for determining ranges. There are several different principles which may be used. The distance may be measured, 1st, by the visual angle subtended by objects of known height; 2d, by the velocity of sound; 3d, the instrument may furnish a base-line in itself and solve a triangle in which the base and two adjacent angles are given. The term is also applied to instruments used to solve a triangle, the base of which is obtained by outside means. Range-finders constructed on the visual angle principle have been known for many years. *Boulanger's* instrument uses the 2d principle. It consists of a glass tube closed at both ends filled with a liquid in which a small umbrella-shaped piece of metal is submerged. The tube is held vertically in the hand, the metal slowly sinks to the bottom. When the flash of the enemy's gun is seen, the tube is inverted and the metal moves towards the other end. When the sound is heard, the tube is brought to the horizontal. The distance through which the piece of

metal has moved gives the range by means of a scale on the side of the tube. *Berdan's range-finder* is an expensive instrument using the 3d principle. It is mounted on a wagon, and intended to accompany either foot-troops or artillery. It has found great favor in Germany. *Nolan's range-finder* consists of an instrument for automatically solving triangles. A similar thing was devised about 1870 by two American officers, Maj. Morgan of the 4th Artillery, and Capt. Lorain of the 3d Artillery. The most ingenious, complete range-finder has been proposed by Lieut. Gordon of the 4th Artillery. He uses two fixed angles and a variable base-line supplied by the instrument itself. The principal parts of Nolan's range-finder are: Two instruments for measuring angles, one tape-line, and one reckoning cylinder. Each of the two instruments consist of two telescopes, which lie crosswise one above the other under an angle of about 90° ; the smaller of the two has a long arm, with a vernier at one end; to the other a sector is fastened, which is divided up into degrees. By means of a screw, an angle of about 20° can be described by the upper or smaller telescope. The reckoning cylinder consists of a solid body and two rotating rings. The lower ring and the lower edge of the body are divided into 100 equal parts. On the upper ring are the logarithms of the figures, and on the upper edge of the body are the logarithms of the signs, from $6''$ up to $2^\circ 15'$.

To find the range, the instruments on their tripods are arranged at the end of the assumed base-line, which is perpendicular to the range; or the instruments may be attached to the right and left guns of a battery. The long telescopes are turned toward the object whose distance is to be found; the smaller ones upon each other, and the cross-threads of each made to cover the cross-lines on the leather disk through which each small telescope points. The coincidence obtained by directing the longer telescope on the object, the two angles at the base are determined; the base-line being measured, one side and two angles of the triangle are obtained. With this data recourse is then had to the reckoning cylinder. The arrow marked "band" is set on the figure that corresponds with the distance between the instruments or base-line,—say 84 yards; then set the arrow on the lower ring on the figure corresponding with the angle found through the instrument,—say 18° ; then find the figure for the number of degrees of the other angle,—say 42° on the lower ring. Just above that is the figure 60 on the other division of the lower ring; coinciding with this on the lower edge of the upper ring is the distance, 1820 yards. The bases used are from 30 to 40 yards for a range of 2000 yards and over.

Watkins's range-finder and *Gautier's telemeter* are instruments which require a measured base-line. See TELEMETER.

Ranger. One of a body of mounted troops, who were formerly armed with short muskets, and who ranged over the country around, and often fought on foot.

Ranging. The disposal of troops in proper order for an engagement, manœuvres, or march, etc.

Rank. Range of subordination, degree of authority. The relative situations which officers hold with respect to each other, or to military things in general. Questions as to the positive or relative rank of officers may often be of the greatest importance at law, in consequence of the rule, that every person who justifies his own acts on the ground of obedience to superior authority must establish, by clear evidence, the sufficiency of the authority on which he so relies. There may also be many occasions on which the propriety of an officer's assumption of command, or his exercise of particular functions, or his right to share with a particular class of officers in prize-money, bounties, grants, and other allowances, may depend on the correctness of the view taken by himself or others of his rights to a specific rank or command; and an error in this respect may expose him to personal loss and damage in suits before the civil tribunals. The regulation of military rank is vested absolutely in Congress, which confers or varies it at pleasure. The will of Congress in this respect is signified by the creation of different grades of rank; by making rules of appointment and promotion; by other rules of government and regulation; or is by fair deduction to be inferred from the nature of the functions assigned to each officer; for every man who is intrusted with an employment is presumed to be invested with all the powers necessary for the effective discharge of the duties annexed to his office. Rank and grade are synonymous, and in their military acceptation indicate rights, powers, and duties, determined by laws, creating the different degrees of rank, and specifying fixed forms for passing from grade to grade and when rank in one body shall give command in another body; and also when rank in the army at large shall not be exercised. Rank is a right of which an officer cannot be deprived, except through forms prescribed by law. When an officer is on duty, the rank itself indicates his relative position to other officers of the body in which it is created. It is not, however, a perpetual right to exercise command, because the President may, under the 62d article of war, at any time relieve an officer from duty; or an officer may be so relieved by arrest duly made according to law; or by inability to perform duty from sickness, or by being placed by competent authority on some other duty. But whenever an officer is on duty his rank indicates his command.

Rank. A line of soldiers; a row of troops reckoned from side to side, or in breadth;—opposed to *file*. *The ranks*, the order of common soldiers; as, to reduce a non-commis-

sioned officer to the ranks. *To fill the ranks*, to supply the whole number, or a competent number. *To take rank of*, to enjoy precedence over, or to have the right of taking a higher place than.

Rank and File. The body of soldiers constituting the mass of the army, and including corporals and privates. In a more extended sense, it includes sergeants also, excepting the non-commissioned staff.

Rank, Brevet. See **BREVE**.

Rank, Double. A rank composed of front and rear files.

Rank, Honorary. That which merely gives a title and precedence, without any command being attached to that rank.

Rank, Insignia of. Are badges or distinguishing marks of office of honor. In the army of the United States the rank of officers is determined by the insignia on the epaulettes and shoulder-straps, and is as follows:

"For the general commanding the army, two gold-embroidered stars of five rays, one on each side equidistant between the centre and the outer edge of the strap, and a gold-embroidered shield in the centre. For the lieutenant-general, three silver-embroidered stars of five rays, one star on the centre of the strap, and one on each side equidistant between the centre and outer edge of the strap; the centre star to be the largest. For the major-generals, two silver-embroidered stars, the centre of each star to be one inch from the outer edge of the gold embroidery on the outer ends of the straps; both stars of the same size. For a brigadier-general, the same as for a major-general, except that there will be but one star instead of two. For a colonel, the same as for a major-general, omitting the stars and introducing a silver-embroidered eagle; cloth of the strap as follows: for the general staff and staff corps—dark blue; artillery—scarlet; infantry—light or sky-blue; cavalry—yellow. For a lieutenant-colonel, the same as for a colonel, according to corps, omitting the eagle, and introducing a silver-embroidered leaf at each end. For a major, the same as for a colonel, according to corps, omitting the eagle, and introducing a gold-embroidered leaf at each end. For a captain, the same as for a colonel, according to corps, omitting the eagle, and introducing at each end two gold-embroidered bars. For a first lieutenant, the same as for a colonel, according to corps, omitting the eagle, and introducing at each end one gold-embroidered bar. For a second lieutenant, the same as for a colonel, according to corps, omitting the eagle. For a brevet second lieutenant, the same as for a second lieutenant."

Rank, Local. See **LOCAL RANK**.

Rank, Relative. See **RELATIVE RANK**.

Rank, Single. A rank of single files.

Rank, Substantive. Is genuine rank, with all the command and authority, as well as precedence, attaching to the title. For instance, a regimental major possesses the

substantive rank of major, while a captain and brevet major is only a substantive captain. It may be briefly described as being the reverse of brevet rank.

Ranker. One who ranks, or disposes in ranks; and one who arranges.

Ransack. To plunder; to pillage completely; to ravage; as, to ransack a city.

Ransom of Prisoners. A prisoner of war, being a public enemy, is the prisoner of the government, and not of the captor. No ransom can be paid by a prisoner of war to his individual captor, or to any officer in command. The government alone releases captives, according to rules prescribed by itself.

Rapier. Is said to have had distinct meanings at different times, and in ancient fencing to have been a long cutting broadsword; but for the last century, at least, the rapier has been a light, highly-tempered, edgeless, thrusting weapon, finely pointed and about 3 feet in length. At present, it is worn only on occasions of court ceremonial, and answers no other purpose than to incommode the wearer. In war a rapier could never have been of any service.

Rapine. The act of plundering; the seizing and carrying away of things by force; spoliation; pillage; plunder. Violence; force; also, to plunder.

Rappahannock. A river of Virginia, formed by the union of the North Fork and the Rapidan, 40 miles above Fredericksburg. On the Rappahannock and the Rapidan occurred some of the most sanguinary battles of the war of Secession, at Fredericksburg, Chancellorsville, and the Wilderness.

Rapparee. A wild Irish plunderer, so called from his being generally armed with a *rapary*, or half-pike. The term was in common use in the 17th century.

Rappel. The beat of the drum to call soldiers to arms.

Rarefaction. The extension of the parts of a gas, by which it is made to take up more room than it did before.

Rasaldar. In the East Indies, the name applied to the commander of *rasallah*, which is 10,000 armed horsemen.

Rasante. A French term, applied to a style of fortification in which the command of the works over each other, and over the country, is kept very low, in order that the shot may more effectually sweep or graze the ground before them.

Ras-el-Kyma. A fortress in the Persian Gulf, and formerly the principal stronghold of the Joasme pirates. This fortress was destroyed and the pirates thoroughly subdued by an English force under Sir W. Kier Grant in 1817.

Rasgrad, or Hesarorad. A town of Turkey in Europe, in Bulgaria, and about 215 miles northwest from Constantinople. The Turks were defeated here by the Russians in 1810.

Rassova. A fortified town of Turkey in Europe, on the right bank of the Danube,

War Ration.

| | | |
|-----------------------------|------|---------|
| Bread..... | 26.5 | ounces. |
| Or Maccuit..... | 17. | " |
| One { Fresh beef..... | 13. | " |
| of { Salt beef..... | 9. | " |
| these { Bacon..... | 5.75 | " |
| Rice..... | 4.4 | " |
| One { Groats..... | 4.4 | " |
| of { Beans..... | 8.8 | " |
| these { Flour..... | 8.8 | " |
| Potatoes..... | 50. | " |
| Salt..... | 8.7 | " |
| Coffee, pure..... | .7 | ounce. |
| Coffee, roasted..... | 1. | " |
| 40.2 ounces anhydrous food. | | |

RUSSIA.

| | 196 Meat Days with schtschl and gruel. | 117 days schtschl and gruel. | 52 days peas and gruel. |
|--------------------------------|--|------------------------------------|-------------------------------|
| Meat..... | 7. oz. | ..... | ..... |
| Bread..... | 42. oz. | 42. oz. | 42. oz. |
| Sour-kraut..... | 14.5 fl. oz. | 14.5 fl. oz. | ..... |
| Chervil..... | 1.1 oz. | ..... | ..... |
| Peas..... | ..... | 2.33 oz. | ..... |
| Buckwheat..... | 1.87 fl. oz. | 1.87 fl. oz. | 1.87 fl. oz. |
| Oats..... | .5 fl. oz. | .7 fl. oz. | .28 fl. oz. |
| Flour..... | .7 fl. oz. | .7 fl. oz. | ..... |
| Onions..... | .3 fl. oz. | .3 fl. oz. | .5 fl. oz. |
| Vegetable oil..... | ..... | .25 fl. oz. | ..... |
| Butter..... | .5 oz. | ..... | ..... |
| Lard..... | ..... | .5 oz. | .5 oz. |
| Salt..... | 1.86 oz. | 1.86 oz. | 1.86 oz. |
| Pepper..... | .07 oz. | .07 oz. | .07 oz. |
| Bay leaves..... | .07 oz. | .07 oz. | .07 oz. |
| Water..... | 70. fl. oz. | 70. fl. oz. | 70. fl. oz. |
| (Buckwheat cooked into gruel.) | | | |

Sepoy Ration.

| | | |
|--------------------------------|------|---------|
| Flour..... | 16. | ounces. |
| Rice..... | 16. | " |
| Butter or vegetable oil..... | 2. | " |
| Peas..... | 4.25 | " |
| Salt..... | 1.33 | ounce. |
| 34.9 ounces of anhydrous food. | | |

Ratisbon, or Regensburg. A town of Bavaria, on the right bank of the Danube, 67 miles north-northeast of Munich. In 1524 the Roman Catholic powers of Germany assembled here, and formed a league against the Protestants; and near it, in 1809, Napoleon I. was wounded in a battle in which he forced the Austrians to retreat.

Raucoux (Belgium). Here Marshal Saxe and the French army totally defeated the allies, October 11, 1746.

Ravage. Desolation by violence; violent ruin or destruction; devastation; havoc; waste; ruin; as, the ravages of an army. Also, to lay waste by force; to desolate violently; to commit havoc or devastation upon; to plunder.

Ravelin. In fortification, is the work constructed beyond the main ditch, opposite the curtain, composed of two faces, forming a salient angle, and two demi-gorges, formed by the counterscarp. It is separated from the covered way by a ditch which runs into the main ditch. See **DEMI-LUNE**.

Ravenna (anc. *Ravenna*). An important city of Central Italy, 48 miles east-southeast from Bologna, 44 miles from the Adriatic. Augustus made it a first-class seaport and naval station. It was taken by Odoacer, then by Theodoric, and by Totila; was subdued by the Lombards in 762, and their

king, Astolphus, in 754, surrendered it to Pepin, king of France. In 1276, Guido da Polenta conquered it. Ravenna was afterwards taken by the Venetians, who kept it till 1509. Under the walls of Ravenna a battle was fought between the French under Gaston de Foix (duke of Nemours and nephew of Louis XII.) and the Spanish and Papal armies. The confederate army was cut to pieces. De Foix perished in the moment of his victory, and his death closed the good fortune of the French in Italy. Ravenna became a part of the kingdom of Italy in 1860.

Ravine. In field fortification, a deep hollow, usually formed by a great flood, or long-continued running of water; frequently turned to advantage in the field.

Raw. Unseasoned, unripe in skill, wanting knowledge in tactics.

Raw Troops. Are inexperienced soldiers, or men who have been little accustomed to the use of arms.

Razant. See **RASANTE**.

Razed. Works or fortifications are said to be razed when they are totally demolished.

Razzia. A plundering and destructive incursion.

Readiness. A state of alertness or preparation; thus, to hold a corps in readiness, is to have it prepared in consequence of some previous order to march at a moment's notice.

Reading. A town of England, in Berkshire, on the Kennet, 86 miles west by south from London. In 871 it was in possession of the Danes, who, after resisting an assault of the West Saxons, were in the following year obliged to evacuate it. In 1006 they again made their appearance, and burned the town. In the civil war of the 17th century Reading was at different times in the possession of both parties, and suffered much during the contest.

Ready. In tactics, a word of command in firing, being a contraction of *make ready*.

Reamer. See **ORDNANCE, CONSTRUCTION OF, BORING**.

Rear. In general acceptance, anything situated or placed behind another.

Rear. The direction opposite the enemy. The opposite of front.

Rear Assembling-bar. See **ORDNANCE, CARRIAGES FOR, THE CAISSON**.

Rear Foot-board. See **ORDNANCE, CARRIAGES FOR, THE CAISSON**.

Rear Open Order. An open order taken by moving the rear rank backwards.

Rear-chest. See **ORDNANCE, CARRIAGES FOR, THE CAISSON**.

Rear-front. The rear rank of a body of troops when faced about and standing in that position.

Rear-guard. A detachment of troops whose duty it is to protect the rear of an army.

Rear-line. The line in the rear of an army.

Rearward. The last troop; the rear-guard.

Rebel. One who rebels; one who revolts from the government to which he owes allegiance, either by openly renouncing the authority of that government, or by taking arms and openly opposing it; one who defies and seeks to overthrow the authority to which he is rightfully subject; a revolter; an insurgent.

Rebel. Acting in revolt; rebellious; as, rebel troops.

Rebel. To revolt; to take up arms traitorously against the state or government; to renounce the authority of the laws and government to which one owes allegiance.

Rebellion. The act of rebelling; open and avowed renunciation of the authority of the government to which one owes allegiance; the taking of arms traitorously to resist the authority of lawful government; revolt; insurrection.

Rebellious. Engaged in or marked by rebellion; traitorously renouncing the authority and dominion of the government to which allegiance is due; violently resisting government or lawful authority; as, rebellious troops.

Rebounding-lock. A gun-lock in which the hammer rebounds to half-cock after striking the cap; specially used in sporting arms.

Rebuffo (*Fr.*). A bastard cannon, or three-fourth carthoum (or karthaune), a 86-pounder of 15 calibers long; according to Ufano a 46-pounder.

Recall. A call on the trumpet, bugle, or drum, by which the soldiers are recalled from duty, labor, etc.

Recaptor. One who retakes; one who takes a prize which had been previously taken.

Recapture. The act of retaking; especially the retaking of a prize or goods from a captor. That which is captured back; a prize retaken.

Recast. To mold anew; to cast anew; to throw into a new form or shape; to reconstruct; as, to recast cannon.

Receipt. A voucher or acknowledgment, which should always be given when official papers are received. When flags of truce are the bearers of a parcel or a letter, the officer commanding an outpost should give a receipt for it, and require the party to depart forthwith.

Receive. In a military sense, to await the approach of a friend or foe. *To receive an enemy*, is to make the best disposition possible of your troops, for the purpose of meeting the attack of an advancing enemy.

Recharge. A renewal of the charge or attack.

Rechaud (*Fr.*). A chafing-dish, or pan used for various purposes, particularly during a siege. Rechauds are filled with burning materials and hung in different parts of the walls, so as to throw light into the ditches, and to prevent surprises.

Rechute (*Fr.*). Literally means a second fall; but in fortification it signifies a greater elevation of the rampart in those parts where it is likely to be commanded.

Recoil. In gunnery, is the retrograde motion impressed upon cannon by the discharge. The gas produced by the ignition of the charge in the bore, expanding with equal force in every direction, finds only two ways of escape (the muzzle and the vent); the pressure upon these points will therefore cease while it will be proportionally increased upon the parts directly opposite, that is, the bottom of the bore and that portion directly opposite the vent, producing in the first case the recoil, and in the other, indirectly, the dipping of the muzzle. The distance of the recoil depends entirely upon the nature and inclination of the ground upon which the carriage stands, the situation of the trunnions, angle of elevation, comparative weight of the gun and carriage, and upon the strength of the charge. The recoil has no appreciable effect upon the flight of a projectile, the latter being expelled from the gun before it has recoiled a fraction of an inch.

The recoil of heavy guns fired with large charges is a serious consideration in gunnery. The recoil must be checked in a comparatively short space, and yet checked too suddenly the shock destroys the carriage as well as platform. Various methods have been tried. The truck-wheels upon which the top carriage runs in and out of battery are provided with eccentrics, which are thrown out of gear to produce sliding friction,—but this alone is not sufficient in most cases. Counter-mortars are sometimes clamped on the chassis-rail against the carriage, but this is objectionable, as it tends to destroy the chassis. Friction-plates, with clamping attachments to the carriage between them, and extending full length of the chassis, have also been tried, but the buckling of the plates soon ruined them. This plan has been recently revived, and the buckling prevented by interposing india-rubber between the rear ends of the plates and the transom of the chassis. For the most approved methods, see **AIR-CYLINDERS** and **HYDRAULIC LOADING APPARATUS**.

Recommend. To commend to the favorable notice of another. Non-commissioned officers of companies are appointed by the colonel upon the recommendation of company commanders. Recommendation of members of a court-martial in favor of the person being tried, is introduced after the finding and sentence are closed and authenticated. The recommendation should distinctly set forth the reasons which prompt it.—*Hough*.

Reconnaissance. The reconnoitring or examination of any tract of country preparatory to the march of an army, in order either to take up quarters for the season, or commence operations against an opposing enemy.

The *military reconnaissance* of a country

is generally performed under the protection of an armed force. It is considered as one of the most essential operations connected with the tactics of the field, and serves as the basis of every movement or combination which it may be proposed to make. Those who are charged with this duty should be habituated to the performance of topographical surveys; in the first place, by the most accurate methods, and with the best instruments; and, secondly, by such methods as admit of being practiced rapidly, on foot or on horseback. In these cases a compass held in the hand must be used for observing the angles, and the distances must be obtained by pacing, or be merely estimated by the eye. The nature of the roads should be described with indications denoting that they are passable for artillery, for cavalry, or merely for infantry; and if defective, estimates should be made of the materials and time requisite for repairing them. In contemplating rivers and marshes as means of retarding an advance of the enemy, it should be ascertained and reported whether by being dry in summer, or frozen in winter, they may not at times cease to be obstacles. It should be also stated how, on a retreat, the roads may be blocked up, the fords rendered impassable, or the bridges destroyed.

Reconnoitre. To make oneself acquainted by personal inspection, as far as may be practicable, with the enemy's position and movements; also, to survey, and draw in a rapid manner, ground of importance to operations of war, not represented in existing maps, with sufficient accuracy or minuteness; and likewise to particularize the banks of rivers, canals, streams, mountains, passes, positions, villages, forts, and redoubts.

Record. To preserve by committing to writing; to make official note of; as, to record the proceedings of a court.

Record. An authentic copy; a statement of the proceedings of a court or board; a written history; an official account or register.

Recorder. One who keeps a record; specifically, the officer who registers the proceedings of a board or minor court.

Recover. In tactics, a word of command in firing whereby the piece is brought from the position of aim to that of ready.

Recreant. Crying for mercy, as a combatant in the trial of battle; yielding; cowardly. Also, one who yields in combat, and cries craven; one who begs for mercy; a mean-spirited, cowardly wretch.

Recruit. To supply with new men, as an army; to fill up or make up by enlistment. Also, a person enlisted to make up deficiency in an army; a newly-enlisted soldier.

Recruiting. The act of obtaining men for service. The people of the United States and Great Britain resemble each other in their jealousy of large standing

armies and their abhorrence of a system of universal service, as well as in their warlike spirit and self-sacrificing patriotism. The organization of the English army, based upon voluntary enlistment, has been pronounced by foreign officers of thorough education and acute observation as unworthy of scientific study,—that is, for home application, although the United States have borrowed a great deal from it,—in the writer's opinion, to their detriment. In Great Britain the whole recruiting has been placed under the immediate direction of the adjutant-general since 1802. For this purpose, the country has been divided into recruiting districts, at the head of which is placed an inspecting field-officer with the duty of superintending all recruiting parties in his district, and of approving the recruits brought. Staff-officers and sergeants of the Pensioner Force are also occasionally intrusted with the obtaining of recruits. The United States recruiting service is conducted by the adjutant-general, under the direction of the Secretary of War. Recruiting officers consist generally of captains and lieutenants of the line, who must not permit any man to be deceived or inveigled into the service by false representations. If the recruit is a minor, his parents or guardians must, if possible, be informed of the minor's wish to enlist, and their written consent obtained therefor. Any male person above the age of eighteen, and under thirty-five years, being effective, able-bodied, sober, free from disease, of good character and habits, with a competent knowledge of the English language, may be enlisted. No man having a wife or child can be enlisted in time of peace without special authority from the adjutant-general's office. The Prussian system is based upon the theory that military service is not a trade or craft, to be followed by a portion of the population, but a duty owed by every male citizen to his country. For further particulars of this system, see *LANDWEHR*. The Prussian system has been adopted by all other states of the German empire, and also by most of the other European nations.

Recruiting Flag. See *FLAG*, *STORM*.

Recruitment. The act or business of recruiting or raising new supplies of men for an army.

Recursant. In heraldry, moving or coursing backward;—said of an eagle displayed with the back towards the spectator's face.

Red Hand. In heraldry, a sinister hand erect, open, and couped, or the wrist gules, being the arms of the province of Ulster, was granted to the baronets of England and of Ireland as their distinguishing badge, on the institution of that order in 1611, and is borne by the baronets of Great Britain and of the United Kingdom. It is assumed into the armorial coat, and may be borne upon a canton, or on an escutcheon, which may be placed either in the middle chief or in the

fess point, so as least to interfere with the charges composing the family arms:

Red River Settlement. Is in British North America, between Lakes Superior and Winnipeg. While the proposed transfer to the crown (1869-70) of the rights of the Hudson's Bay Company was pending, it was the scene of much contention and violence. The hasty action of the Canadian authorities incensed the French-speaking population, who, led by Louis Riel, organized a force, imprisoned their opponents (English and Scotch), seized on Fort Garry, established a provisional government, robbed the strong-box, and dictated terms to the governor of the Hudson's Bay Company, who was obliged to submit to them. In July, 1870, a military force suddenly appeared in the province, and Riel fearing capture, escaped, and thus closed the insurrection.

Red Tape. The tape used in public offices for tying up documents, etc.; hence, official formality.

Redan. Is the simplest work in field fortification. It consists of two parapets whose faces join in forming a salient angle toward the enemy, like a letter V, in which the apex is to the front. Regarded by itself, the redan is a work of very little strength, since there is no flanking fire to protect its faces, and nothing to prevent an enemy from forcing an entrance at the gorge; but redans are useful in many positions, and the rapidity with which they may be constructed renders them favorites with engineers and generals. A row of redans along an exposed front of an army adds much to its strength, the troops behind protecting the gorge, and the redans flanking each other. It forms an excellent defense for a bridge-head, the gorge being covered by the river. Redans figured largely in Wellington's works for defending Lisbon in 1810. The redan of Sebastopol in 1855 was the principal point of the English attack, and the scene of two bloody repulses by the Russians in June and September.

Redcoat. A soldier who wears a red coat; an English soldier.

Red-hot Shot. Are cannon-balls heated to redness, and fired from cannon at shipping, magazines, wooden buildings, etc., to combine destruction by fire with battering by concussion. In modern warfare, shells containing molten iron are intended to be used in lieu of red-hot shot; but they have not yet been tested in actual practice, although a similar device was attempted unsuccessfully in 1863 by the U. S. forces when besieging Charleston.

Redinha. A village of Portugal, province of Estremadura, the scene of an affair between the British under Lord Wellington, and the French retreating army under Marshal Masséna, in 1811.

Redoubt. Is a small fort of varying shape, constructed for a temporary purpose, and usually without flanking defenses. The term is vague in its acceptance, being ap-

plied equally to detached posts and to a strong position within another fortress. Redoubts are made square, pentagonal, and even circular. Each redoubt has parapet, ditch, scarpe, banquette, etc., as in regular fortification; but it is commonly rather roughly constructed, haste and unprofessional labor precluding mathematical accuracy. The entrance may be by a cutting through the parapet, the cutting being covered within by a traverse, or, preferably, by an excavated gallery leading into the ditch, and thence by a ramp through the counterscarp. For the sake of flanking the ditch, and preventing an assaulting party from forming in it, caponnières of timber, loop-holed, are sometimes formed; or, if the soil be stiff or chalky, a gallery may be cut behind the counterscarp, and loop-holed towards the ditch. In some modern redoubts, the line of each side is broken to afford flanking defense. Redoubts have the weak feature of not defending their own ditches, and of being approached at their salient angles with comparative impunity. They are therefore not adapted to a protracted defense, but as temporary field-works, or in war of posts, they are often of incalculable importance. Troops whose stability in open field is doubtful are especially strengthened by redoubts in their line. Redoubts are particularly useful in fortifying the tops of hills, or commanding passes, or where the object is to occupy a hostile territory, or to feel the way gradually through a wooded country.

Redoubtable. Formidable; to be dreaded; terrible to foes; as, a redoubtable hero; hence, valiant; often in contempt or burlesque.

Redout Kalé, or Redoot Kalé. A flourishing, fortified seaport of Russia, in Trans-Caucasia, stands on the eastern shore of the Black Sea, about 15 miles north of Poti. During the Crimean war, the Russian garrison at Redout Kalé, finding the fort invested by Sir Edmund Lyons, with several men-of-war, set fire to the town, May 19, 1854.

Redressing Wrongs. See APPENDIX, ARTICLES OF WAR, 29, 30.

Reduce a Place. Is to oblige the commander to surrender it to the besiegers, by capitulation. *To reduce the square*, is to restore or bring back a battalion or battalions, which have been formed in a hollow or oblong square, to their natural situation in line or column. *To reduce to the ranks*, is to degrade, as to reduce a non-commissioned officer, for misconduct, to the station of a private soldier.

Reduce, To. To degrade to a lower rank.

Reduced. In a military sense, is to be taken off the establishment, and to cease to receive pay as soldiers. When a regiment is reduced, the officers are generally put upon half-pay. Sometimes the corps are reduced, and the officers remain upon full pay. This happens at the close of a war, when the standing army of the country is con-

fined to a certain number of battalions. Hence is derived the expression, *in and out of the break*. In the *break*, is the liability of being reduced. *Out of the break*, is the certainty of being kept upon the establishment.

Reduit. In fortification, is a central or retired work within any other work, intended to afford the garrison a last retreat, whence they may capitulate. It is commonly of masonry, loop-holed, and often circular. Many engineers doubt the use of reduits altogether, as blocking up the working space, being themselves inconvenient for the men, and incapable of protracted defense, while they frequently mask the fire of other works more to the rear.

Re-embark. To embark or go aboard of a ship again.

Re-embattle. To array again for battle; to arrange again in the order of battle.

Re-engage. To engage again; to enlist a second time.

Re-enlist. To enlist again. In the U. S. army any non-commissioned officer, musician, or private soldier, who re-enlists within one month after the date of discharge from first enlistment, receives \$2 per month in addition to the monthly pay he was receiving prior to discharge; and also \$1 per month additional after each subsequent re-enlistment so long as he shall remain continuously in the army.

Re-enlistment. A renewed enlistment.

Re-entering Angle. See **ANGLE**.

Re-entering Place of Arms. In fortification, is an enlargement of the covered way of the fortress, between a bastion and a ravelin; its rear coinciding with the counter-scarp of the ditch, and its front consisting usually of two faces of the glacis, which are disposed at angles of about 100° with the glacis before the neighboring bastion and ravelin. It serves as a place for assembling troops previously to making sorties; and the fire from its faces serves to defend the approaches to the salient parts in front of the collateral works.

Rees. A town of Rhenish Prussia, 12 miles southeast from Cleves. This town was taken by the Dutch in 1614, and by the French in 1678.

Reflection, Angle of. Whether the instance be a ray of light or a cannon-ball, the angle of reflection will always be found equal to the angle of incidence.

Re-form, To. In a military sense is, after some manœuvre or evolution, to bring a line to its natural order by aligning it on some given point. Also, to restore order among broken troops.

Reformado. An officer was formerly so called, who for some disgrace was deprived of his command, but retained his rank, and perhaps his pay.

Reformed Officer. In the British army, one whose troop or company being broken up, is continued on full or half-pay. He preserves the right of seniority, and continues in the way of preferment by brevet.

Re-fortification. A fortifying anew, or a second time.

Re-fortify. To fortify anew.

Refusal to Receive Prisoners. See **APPENDIX, ARTICLES OF WAR, 67.**

Refuse, To. In a military sense, is to refuse a wing, to throw it back, or to keep it out of that regular alignment which is formed when troops are upon the point of engaging an enemy. *To refuse any part of the line in battle*, as the centre or a wing, to keep that part retired, while the remainder is advanced to fight.

Regardant. A term used in heraldry, with reference to an animal whose head is turned backwards. See **PASSANT** and **RAM-PANT**.

Regensburg. See **RATISBON**.

Reggio (anc. *Rhegium*, which see). A city in Southern Italy which was taken by Garibaldi, August, 1860.

Regillus Lacus. A lake in Latium, memorable for the victory gained on its banks by the Romans over the Latins, 498 B.C.

Regiment. In all modern armies, is a colonel's command, and the largest permanent association of soldiers. Regiments may be combined into brigades, brigades into divisions, and divisions into corps and armies; but these combinations are but temporary, while in the regiment the same officers serve continually, and in command of the same body of men. The strength of a regiment may vary greatly even in the same army, as each may comprise any number of battalions. French and Austrian regiments have ordinarily four to six battalions. Among British infantry the smallest regiments are those numbered from the 26th upwards (except the 60th), which, unless serving in India, have 1000 men each, composing one battalion. Regiments in India have 1200 to a battalion. The largest regiment is the Royal Artillery, comprising 84,718 officers and men. The strength of a regiment, however, is changed from time to time; usually by the addition or withdrawal of private soldiers. In the U. S. service the strength of cavalry regiments is about 1200 men each, artillery about 600, and infantry about 500 each. The regimental system could only exist where standing armies were maintained. Accordingly the Macedonian syntagmata and the Roman cohorts were evidently regiments in a strict sense. During the Middle Ages, feudal organization precluded the system, and its first appearance was in France. Francis I. formed legions of 6000 men each, which were divided into independent companies, the latter being, in fact, battalions, and each legion a regiment. The word regiment began to be applied to bodies of British troops in Elizabeth's reign; regiments are spoken of at the time of the Armada, 1588, and as composing the force in Ireland, 1598. From that time forward the army and militia of Britain have been organized in regiments.

Regimental. Anything belonging to a regiment.

Regimental Colors. See **COLORS**.

Regimental Court-martial. Is a legal tribunal convened for the punishment of offenders in the army. It is composed of three members and a judge-advocate. See **COURT-MARTIAL**, **JUDGE-ADVOCATE**, and **TRIAL**.

Regimental Courts-martial. See **COURT-MARTIAL**.

Regimental Inspection. See **INSPECTION**.

Regimental Necessaries. See **NECESSARIES**.

Regimental Orders. See **ORDERS**, **REGIMENTAL**.

Regimental Schools. In Great Britain, are educational establishments maintained by the state in every regiment, for the instruction of soldiers and soldiers' children. There is a schoolmaster for the soldiers and elder boys, and a trained schoolmistress—usually the schoolmaster's wife—to teach the girls and infants of both sexes. Attendance at the schools is compulsory for the soldiers and optional for the children. Religious instruction takes place on Monday mornings, when children can be kept from school if their parents object to the instruction imparted. The girls' school comprises an "industrial" section for needle-work, etc.

In France, *écoles primaires* or *regimentaires*, "primary or regimental schools," were founded in 1818, in which the soldiers were taught writing, reading, and arithmetic.

In Prussia, there are established garrison schools (*Garnisons Schulen*) for the instruction of soldiers' children; and battalion schools (*Bataillons Schulen*), in which non-commissioned officers and privates are instructed in writing, reading, orthography, and arithmetic; also in making out reports and other official papers.

Regimentals. The uniform worn by the troops of a regiment.

Register. A list or roll; as, the army register; which is a list of the officers, with rank and date of commission, etc.

Regulars. Are those troops whose conditions of enrollment are not limited to time or place, in contradistinction to militia or volunteer corps; troops permanently in service.

Regulation Sword. A sword of the kind or quality prescribed by the official regulations. Also regulation cap, uniform, etc.

Regulations. Under the Constitution of the United States, rules for the government and regulation of the army must be made by Congress. Regulation implies regularity; it signifies fixed forms; a certain order; method; precise determination of functions, rights, and duties. (See **MILITARY REGULATIONS**.) A "regulation" of an executive department is a rule by the head of such department for its action, under a statute conferring such power, and has the force of law; a mere order of the President, or of the

Secretary of the department, is not a regulation. The power of the Executive to establish rules and regulations for the government of the army is undoubted. The power to establish implies necessarily the power to modify or repeal, or to create anew. The Secretary of War is the regular constitutional organ of the President for the administration of the military establishment of the nation; and rules and orders publicly promulgated through him must be received as the act of the Executive, and as such be binding upon all within the sphere of his legal and constitutional authority. Such regulations cannot be questioned or defied, because they may be thought unwise or mistaken. But as it sometimes occurs that rights of rank, command, and pay, concerning which Congress has legislated, are subjects of dispute, and variable expositions of laws regulating those essentials of good government have been by different Executives, with an increasing tendency to invalidate rank created by Congress; there should be a law passed by Congress to enable cases to be brought before the Federal civil courts, in order that the true exposition of military statutes and authorities in dispute may be determined. With such a remedy, laws, however defective they may be, would at least be known, and rights, powers, and duties, established by law would be well determined.

Regulators. The popular name of a party in North Carolina, which arose in 1768, and had for its object the forcible redress of public grievances.

Reigate. A town of England, in the county of Surrey. Its castle was destroyed in 1648. Its church contains the tomb of Lord Howard, who commanded the English fleet against the Armada.

Reign of Terror. A term applied to a period of anarchy, bloodshed, and confiscation, in the history of the French revolution, during which the country was under the sway of the actual terror inspired by the ferocious measures of its governors, who had established it avowedly as the principle of their authority. It commenced after the fall of the Girondists, May 31, 1793, and extended to the overthrow of Robespierre and his accomplices, July 27, 1794. Thousands of persons were put to death during this short time.

Reims. See **RHEIMS**.

Rein. A crack or vein in a musket-barrel.

Reinforce. In gunnery, is the thickest part of the body of the gun, in front of the base-ring or base-line; if there be more than one reinforce, that which is next the base-ring or base-line is called the *first reinforce*; the other the *second reinforce*. See **ORDNANCE**, **CONSTRUCTION OF**, **MOLDING**.

Reinforce. To strengthen with new force, assistance, or support; especially, to strengthen, as an army or a fort, with additional troops, or a navy with additional ships.

Reinforce Band. Is at the junction of the first and second reinforces.

Reinforcement. The act of reinforcing. That which reinforces; additional force; especially additional troops or force to augment the strength of an army, or ships to strengthen a navy.

Reitres (Fr.). A body of armed horsemen, who came out of Germany and entered the French service during the reign of Henry III. They were incorporated with the carabineers.

Rejoin. To join again; to return; as, the officer rejoined his regiment.

Rejoinder. In military law, the defendant's answer to the plaintiff's replication. The weight of authority is against permitting a rejoinder on the part of the prisoner, unless evidence has been adduced in the reply of the prosecutor. But such evidence should not be permitted in reply, and there should be no rejoinder.—*Hough's "Military Law Authorities."*

Relais (Fr.). A term used in fortification to signify a space, containing some feet in breadth, which is between the foot of the rampart and the scarp of the fosse. It serves as a convenient receptacle for the earth that occasionally crumbles off.

Relative Rank. Signifies the comparative rank, as regards precedence, etc. The following is the relative rank of officers in the army and navy of the United States:

| Army. | Navy. |
|------------------------|-------------------|
| General..... | Admiral. |
| Lieutenant-general.... | Vice-admiral. |
| Major-general..... | Rear-admiral. |
| Brigadier-general..... | Commodore. |
| Colonel..... | Captain. |
| Lieutenant-colonel.... | Commander. |
| Major..... | Lieut.-commander. |
| Captain..... | Lieutenant. |
| First lieutenant..... | Master. |
| Second lieutenant..... | Ensign. |

The officers of the marine corps are of rank corresponding to that of those of the same titles in the army.

Release of Prisoners. See APPENDIX, ARTICLES OF WAR, 69.

Relief. A fresh detachment of troops, ordered to replace those already upon duty. Also, the body of men proceeding to take the places of, or *relieve*, the existing sentinels. Guards are usually divided into three *reliefs*. See GUARD, RUNNING.

Relief. In fortification, is the height to which works are raised above the bottom of the ditch. If the works are high and commanding, they are said to have a bold *relief*; but if the reverse, they are said to have a low *relief*. The *relief* should provide the requisite elevations for the musketry and artillery, to insure a good defense.

Relieve, To. Is to take a man or a body of men off any kind of duty; as, to relieve a sentinel; to relieve the guard, etc.; also to succor, to deliver; as, to relieve a besieged town.

Reliever. An iron ring fixed to a handle, by means of a socket, so as to be at right angles to it. It serves to disengage the searcher of a gun, when one of its points is retained in a hole, and cannot be extracted otherwise.

Relieving the Enemy. See APPENDIX, ARTICLES OF WAR, 45.

Reload. To load anew, as a gun, etc.

Reloading Implements. Are implements used in reloading cartridge-shells,—to perform the various operations of measuring the powder, setting home the bullet or charge, removing exploded primer, recapping, etc.

Remaining Velocity. In gunnery, is the velocity of the projectile at any point of the flight.

Remand. To send back; as when a soldier who has been discharged from prison or the guard-house, for the purpose of being examined or tried, is sent back to await the final decision of his case.

Remarks. Army returns, regimental returns, guard reports, etc., have a column allotted for observations relative to extraordinary occurrences, and these are headed "remarks." The word is also applied with reference to a reviewing officer's observations on the verdict of a court-martial.

Remblai. Is the quantity of earth in the mass of rampart, parapet, and banquette.

Remedy. The rules and articles for the government of the army are defective in not providing sufficient remedies for wrongs. The army of the United States is governed by law. The law should therefore provide a sufficient remedy for cases in which the rights of officers are wrested from them by illegal regulations, purporting to interpret the true meaning of acts of Congress. In cases arising in the land and naval forces of the United States, where the true construction of any act of Congress is in dispute, legislation is wanted to enable an officer who thinks himself wronged by an illegal executive decision, to bring the matter before the Federal civil courts to determine the true exposition of the statute or authority in dispute.

Remi, or Rhemi. One of the most powerful people in Gallia Belgica. They formed an alliance with Cæsar when the rest of the Belgæ made war against him, 57 B.C.

Remington Rifle. See SMALL-ARMS.

Remit. To lessen; as, to remit a part of a soldier's sentence.

Remonstrate. To make a representation of a case or cases wherein one or more may consider themselves to be aggrieved. Military men may remonstrate through their superior officers; but where the duty of the service is concerned, that duty must be first performed with cheerfulness and fidelity.

Remount. A supply of good and serviceable horses for the cavalry. *To remount the cavalry*, is to furnish them with horses in the room of those which have been either killed, disabled, or cast.

Renchen. A town of Baden, on the Rench, 8 miles northeast from Offenburg. The French defeated the Austrians here in 1796, and entered Suabia.

Rendezvous. A place appointed for a meeting; especially, the appointed place for troops, or for the ships of a fleet, to assemble; sometimes a place for enlistment. Also, to assemble or meet at a particular place, as troops, ships, etc.

Rendsburg. A fortified town of Holstein, on an island in the Eyder, at the commencement of the Kiel Canal. It was taken by the Imperialists in 1627; by the Swedes in 1648; and by the Prussians and confederate troops in 1848. It was reoccupied by the Danes in 1852, and taken by the Prussians after a serious conflict, July 21, 1864.

Renegade. One who deserts from a military or naval post; a deserter.

Rennes (anc. *Condate*). A town of France, capital of the department of Ille-et-Vilaine, 60 miles north of Nantes. After the fall of the Roman empire it fell into the hands of the Franks. In 1357, Rennes was unsuccessfully besieged by the Duke of Lancaster; and at the time of the revolution was the scene of some conflicts, being always firmly attached to the popular cause.

Reorganize. To organize anew; to reduce again to an organized condition; to cause to assume wonted or regular functions; as, to reorganize an army.

Repair of Arms. The keeping in constant good order the different fire-arms belonging to a troop or company, such as rifles, etc. In the British army, a half-yearly allowance is made to captains of troops and companies for this purpose. In the U. S. service the cost of repairs of damage done to arms, equipments, etc., through negligence of an officer or soldier, is deducted from the pay of said officer or soldier.

Repeater. A fire-arm that may be discharged many times in quick succession; especially, a form of fire-arm so constructed that the charges are successively introduced, by an action of the lock, from a chamber containing them, into the breech, and fired or are discharged from a revolving chamber at the breech. See REVOLVER and MAGAZINE GUN.

Repel. To drive back; to force to return; to check the advance of; to repulse; as, to repel an enemy or an assailant.

Reply. It is the duty of a court to prevent new matter from being introduced into the prosecution or defense, but a prisoner may urge in his defense mitigating circumstances, or examine witnesses as to character or services, and produce testimonials of such facts, without its being considered new matter. If any point of law be raised, or any matter requiring explanation, the judge-advocate may explain. No other reply to be admitted.—*Hough*.

Report. Sound; loud noise, as that made by the discharge of a rifle or a cannon.

Report. A specific statement of any par-

ticular occurrences. Officers making written reports are required to sign them, specifying the regiment to which they belong, and their rank.

Reporting Prisoners. See APPENDIX, ARTICLES OF WAR, 68.

Repose, In (Fr. *en repos*). This term, which is manifestly taken from the French, applies to troops that are allowed to be stationary for any given period during an active campaign, either through sickness or from some other cause. Thus, the 5th regiment being in repose, the 24th was ordered to the front.

Repository. A place, or repertory, in which anything is preserved. Thus, the British repository at Woolwich contains models of every sort of warlike stores, weapons, and fortifications; whether invented by officers of the army or civilians, as well of other nations as of Britain, receipts being given to preserve the title to the inventor.

Repress. To press back or down effectually; to crush down or out; to quell; to subdue; as, to repress rebellion.

Reprimand. A reproof for some error or misconduct. A reprimand is sometimes publicly conveyed to officers, either in orders or at the head of a regiment, by direction of the President or a general officer in command. Non-commissioned officers and privates are sometimes reprimanded. See APPENDIX, ARTICLES OF WAR, 52.

Reprisal. Is the retaking, from an enemy, goods which he has seized, or the capture from him of other goods, as an equivalent for the damage he has wrought.

Reproachful or Provoking Speeches. See APPENDIX, ARTICLES OF WAR, 25.

Repulse. To repel; to beat or drive back. The condition of being repelled or driven back. Also, the act of repelling or driving back.

Requisitions. Are forms prescribed for the demand of certain allowances, as forage, rations, etc. It also signifies the act of exacting either men or things for the public service. Requisitions are, however, an uncertain and unequal means of supply and only enable an army to live from hand to mouth, and although practicable in offensive wars, are only justifiable in rapid movements, where time does not admit the employment of more certain means of supply. The system is less odious than pillage. Bonaparte skillfully adopted another method, in harmony with the spirit of wars of invasion, and also more reliable as a means of support. He substituted himself in place of the supreme authorities of the invaded country, and exacted *pecuniary contributions*, paying, or promising to pay, for all provisions and other supplies needed for his army. This system was well executed by Marshal Suchet in Spain, and a similar system was also matured and published in orders by Gen. Scott while in Mexico. A treaty of peace, however, soon after was made, which put an end to military operations, and the system was

therefore only partially executed. But with a sufficient army in a fertile country, the experience of the world has shown that if the inhabitants are protected from injuries, they will very generally sell to the best paymasters. It is therefore the interest of an invading army not to interfere with the ordinary avocations of citizens, and such is the modern usage.

Rereward. The part of an army that marches in the rear, as the guard; the rear-guard.

Resaca de la Palma. A ravine which crosses the Matamoras road about 8 miles north of that place; the position taken by the Mexican general Arista to resist the further advance of Gen. Taylor's army. Although the latter was outnumbered three to one, the Mexicans were routed after a short conflict (May 9, 1846) and driven across the Rio Grande.

Rescue. The retaking by a party captured of a prize made by the enemy.

Reservation, Military. Land set aside from the public domain by the President of the United States for military purposes.

Reserve. In army affairs, is a body of troops held somewhere in the rear, generally out of fire, and kept fresh, in order that they may interfere with decisive force at any point where yielding troops require support, or an advantage gained needs powerful following up. The reserve of ammunition is a magazine of warlike stores, situated between an army and its base of operations, sufficiently retired from the front to be safe from sudden raids of the enemy, and at the same time advanced enough to allow of the supply actually in the field being speedily replenished.

Reserve, Army. In Great Britain, is divided into first and second class reserves. The first class consists of men who are serving or have served in the regular army, and whose past service has not exceeded their first term of enlistment. These men are liable to be called out for training for a period not longer than twelve days in a year, and to be permanently embodied for general service in case of imminent national danger or great emergency. The second class consists of out-pensioners of Chelsea Hospital, and persons enrolled in the force under the provisions of the 6th, 7th, 9th, and 10th Victoria. The members of this force may be called out for training as if they were in the first class, but can only be permanently embodied in case of national danger or great emergency, for service in the United Kingdom. For army reserve in Prussia, see **LANDWEHR**.

Reserve Equipage. See **PONTONS, BRIDGE EQUIPAGE**.

Ressaldar. In the East Indies, is a native officer in a native cavalry regiment. He commands the right troop of a squadron, and on parade leads the squadron.

Ressaldar Major. In the East Indies, is the native commandant of a native cavalry regiment.

Rest. In tactics, a word of command whereby the men are brought to a position of rest; as, parade rest, in place rest.

Rest on Arms. A word of command which is used at military funerals.

Retained Pay. In the U. S. army, is pay that is retained from the soldier until the expiration of his term of service.

Retainers. See **APPENDIX, ARTICLES OF WAR, 68**.

Retaliation. This should never be resorted to as a measure of mere revenge, but only as a means of protective retribution, and, moreover, cautiously and unavoidably; that is to say, retaliation is only to be resorted to after careful inquiry into the real occurrence and the character of the misdeeds that may demand retribution.

Retiarius. A kind of gladiator who fought in the amphitheatre during the time of the Romans. He was dressed in a short coat, having a *fuscin*, or trident, in his left hand, and a net, from which he derived his name, in his right. With this he endeavored to entangle his adversary, that he might then with his trident easily dispatch him. On his head he wore only a hat tied under his chin with a broad ribbon.

Retinue. Applied strictly to the admiral's suite or followers, though it means an accompanying train in general; whether military, naval, or civil.

Retirade. In fortification, a retrenchment, which is generally made with two faces, forming a re-entrant angle, and is thrown up in the body of a work, for the purpose of receiving troops, who may dispute the ground inch by inch.

Retire. Signifies to fall back a short distance. Also, a bugle-sound intimating to skirmishers that they are to fall back. This bugle-sound in the U. S. service is termed "to the rear."

Retired Flank. In fortification, a flank having an arc of a circle with its convexity turned toward the place.

Retired Full Pay. See **FULL PAY, RETIRED**.

Retired List. Is a list of officers retired from the army or navy. In every service, to maintain a reasonably low age among the persons actively employed, it is essential that some scale should be fixed for retirement of old and worn-out officers. In the British army, medical officers are allowed to retire after twenty-five years full-pay service; other officers after thirty years on full pay, or twenty-five years on half-pay. In the navy, officers are placed on the retired list at sixty years of age, with the rank they then hold. In most cases, in both services, the retiring officer is allowed a step of honorary rank; but this higher rank carries neither present nor prospective advantage. Officers of the U. S. army may be retired on their own application after thirty years' service. If an officer has been borne on the army register for forty-five years, or if he has attained the age of sixty-two years, he may be

retired at the discretion of the President. Officers retired from active service receive 75 per cent. of the pay of the rank upon which they were retired. Retired officers of the army may be assigned to duty as professors of colleges and at the Soldier's Home, and shall not be assignable to any other duty. Any officer may be retired on account of disability contracted in the line of duty. When an officer has served forty years as a commissioned officer he shall, if he makes application therefor, be placed on the retired list. Officers retired shall be withdrawn from command and promotion. Officers may be wholly retired for disability not incident to the service and dropped from the rolls of the army with one year's pay. Officers of the marine corps shall be retired in the same manner and with the same relative conditions as are provided for officers of the army.

Retreat. The retrograde movement of any army or body of men who retire from the enemy. It signifies a more prolonged and systematic movement to the rear than retire. *Full retreat* is when an army retires with all expedition before a conquering enemy. The retreat is also a beat of the infantry drums, or sounding of the bugles or trumpets, which takes place every day at sunset, and at which troops fall in and the roll is called; the details for duty the following day, and orders, are published. *To retreat* is to make a retrograde movement. An army or body of men are said to retreat when they turn their backs upon the enemy, or are retiring from the ground they occupied; hence, every march in withdrawing from an enemy is called a retreat.

Retreat of the Ten Thousand Greeks. The 10,000 Greeks who had joined the army of the Younger Cyrus in his revolt against his brother, Artaxerxes Mnemon, were victors, but Cyrus was defeated and slain at Cunaxa, 401 B.C. Artaxerxes having enticed the Greek leaders into his power and killed them, Xenophon was called to the command of his countrymen. Under continual alarms from sudden attacks, he led them across rapid rivers, through vast deserts, over the tops of mountains, till he reached the sea. The Greeks returned home after a march of 1155 parasangs, or leagues (8466 miles), which was performed in 215 days, after an absence of fifteen months.

Retrench. To furnish with a retrenchment; as, to retrench bastions.

Retrenchment. In fortification, is a defensive work, comprising at least ditch and parapet, within some other work of a fortress, and intended as a place of retreat for the defenders, whence they may prolong the defense, or capitulate after the faces of the work itself have fallen into the enemy's hands. The retrenchment bears a considerable resemblance to the *reduit*, except that it is almost always of earth. Retrenchments are made in ravelins, and the re-entering *place d'armes* at the time of constructing the

works. A retrenchment is thrown across the gorge of a redan or bastion, or from shoulder to shoulder, when it is apprehended that the salient angle will fall into the possession of the besiegers; these retrenchments are usually made when wanted. Such a retrenchment across the interior of the Redan at Sebastopol caused the sanguinary repulse of the British on September 8, 1855.

Return. An official account, report, or statement, rendered to the commander or other superior; as, the return of men fit for duty; the return of the number of the sick; the return of provisions, etc. For punishment of officers making false returns, see APPENDIX, ARTICLES OF WAR, 8.

Returns of a Mine. Are the turnings and windings of the gallery leading to the mine.

Returns of a Trench. Are the various turnings and windings which form the lines of the trench, and are, as near as they can be, made parallel to the place attacked, to avoid being enfiladed.

Reveille. The beat of the drum about break of day, to give notice that it is time for the soldiers to rise, and for the sentinels to forbear challenging.

Reveil-matin (Fr.). A double cannon; an ancient 96-pounder.

Revel, or Reval. A strongly fortified seaport town of Russia, government of Esthonia, on a small bay on the south side of the Gulf of Finland, 200 miles west-south-west from St. Petersburg. It was long held by the Teutonic Knights; was made over to Sweden in 1662; bombarded by the Danish and Lübeck fleets in 1669; besieged by Peter the Great, and annexed to the Russian empire in 1710. In 1718 a naval harbor, in addition to the commercial harbor, was founded.

Reverse. A change for the worse, or partial defeat.

Reverse Fire. See FIRE, REVERSE.

Reverse Flank. See FLANK, OUTWARD.

Reversed. Upside down; as, arms reversed. Arms are said to be reversed when the butts of the pieces are slung, or held upwards.

Reversed. In heraldry, a term applied to a charge turned upside down.

Revet. In fortification, to face with masonry, wood, or material, as an embankment.

Revetment. In permanent fortification, is a retaining wall of masonry built for the purpose of holding back the earth of which works are composed. The most ordinary position of revetments is for the escarp and counterscarp of the ditch. The most important of these two is the escarp, which has to hold back the great mass of earth represented by the rampart, parapet, banquette, etc. It is usually of solid brick-work or stone, 5 feet thick at the top, and sloping outwards as it descends (on the ditch side only) to the extent of 1 in 6. Prior to Vauban's time, the escarp revetment was com-

monly raised to the top of the parapet; but as in this case the artillery of a besieger played on the top of the wall, and ruined it soon after the siege commenced, that engineer adopted the principle—thenceforth followed—of raising it no higher than the crest of the glacis, or about 7 feet above the natural ground, leaving the parapet above of sloped earth only. When the main ditch is 24 feet deep, the scarp revetment will be about 80 feet high. Additional strength is imparted to the revetment wall by massive buttresses at every 15 feet, called *counterforts*, and these again are sometimes connected and strengthened by masonry arches outside the revetment. The revetment forms a terrible barrier to an assaulting party. In field-works temporary revetments may be made of timber, turf, hurdles, or any other materials on hand.

Review. An examination or inspection of troops under arms, by a general or commander, for the purpose of ascertaining the state of their discipline, equipments, etc.

Revision. A re-examination for correction. Where an officer, who orders a court-martial, does not approve their proceedings, he may, by the custom of war, return them to the court for revision, and no additional evidence can be taken on such revision.—*Hough.*

Revocable. That may be recalled. Nominations for appointments in the army are made by the President of the United States, subject to the concurrence of the Senate, who, if they disagree, revoke the appointment.

Revolt. To renounce allegiance or subjection; to rise against the government in declared rebellion.

Revolution. In politics, any extensive change in the constitution of a country suddenly brought about. The most important events in history known under this name are: The destruction of the Assyrian empire, and the foundation of that of the Medes and Persians by Cyrus the Great, 536 B.C.; the foundation of the Macedonian empire on the destruction of the Persian, by the defeat of Darius Codomanus, by Alexander the Great, 331 B.C.; the establishment of the Roman empire on the ruins of the republic by Julius Cæsar, 47 B.C.; the establishment of the empire of the Western Franks under Charlemagne, 800; the revolution in Portugal, by which the Portuguese threw off the Spanish yoke and placed John, duke of Braganza, on the throne, 1640; the English revolution of the 17th century, which began in the early part of the reign of Charles I., with the struggle between that king and his Parliament. In 1642, the struggle became a civil war, in which the Parliament obtained the ascendancy, and brought Charles to the block in 1649. A republic followed, under the protectorate of Oliver Cromwell, which was succeeded in 1660 by the restoration of monarchy in the person of Charles II.; but the arbitrary

rule of James II. brought the king and people again into antagonism, and James having fled the country, William III. was called to the throne under such conditions and safeguards as secured the balance of the constitution. The revolutions in Russia, 1730 and 1762. The French revolution was a violent reaction against that absolutism which had come in the course of time to supplant the old feudal institutions of the country. It began with an outbreak of insurrectionary movements at Paris in July, 1789, including the destruction of the Bastille. On January 21, 1793, King Louis XVI. was beheaded. A disastrous reign of terror followed (see *REIGN OF TERROR*), which was brought to an end in 1794. The revolution in Sweden, 1772 and 1809; in Holland, 1795, and counter-revolution in 1813; in Poland, 1704, 1795, and 1830. The American Revolution of 1775, by which the United States threw off their dependence on Great Britain. The French revolution of 1830, which drove Charles X. into exile, and raised Louis Philippe, duke of Orleans, to the throne by the will of the people; as also the revolution of 1848, when France rose against Louis Philippe and adopted for a time a republican form of government; which was followed by the revolution of 1851. The revolutions in the Netherlands, and in Brunswick, 1830; in Brazil, 1831; in Hungary, 1848; in Rome, 1798 and 1848; in Italy, 1859-60, when the various minor sovereigns were driven into exile, and the whole of the peninsula, with the exception of the Roman and Venetian territory, became subject to the constitutional sway of Victor Emmanuel; in the United States, 1860-65; in the Danubian principalities, 1869; and the Papal States, suppressed, October, 1867.

Revolutionary. Tending or pertaining to a revolution in government; as, a revolutionary war.

Revolutionary Tribunal. The name specially given to the infamous court of judgment—the most extreme republican will scarcely affirm that it was a court of justice—instituted by the French Convention in March, 1793, on a motion made by Danton, who considered that such a court had become necessary, inasmuch as the recent disasters that had befallen the national armies on the frontiers had led to dangerous conspiracies against the revolutionary government. Its members were chosen from the various departments, and their appointment was ratified by the Convention. Their function was to sit in judgment on all persons accused of crimes against the state, and from their sentence, delivered with appalling promptitude, there was no appeal. During the "Reign of Terror" (which see), when Fouquier-Tinville was "public accuser," it acquired a horrible notoriety, abolishing soon almost all forms of justice, neither hearing witnesses on behalf of the accused, nor allowing him an opportunity of defense,

but blindly executing the orders of the "Committee of Public Safety," which was merely a tool in the hands of Robespierre. In the provinces, similar tribunals, under the name of "Revolutionary Committees," were established, the commissaries-general of which, as, for instance, Carrier, shot or drowned *suspects* in crowds.

Revolvers. See SMALL-ARMS, REVOLVER.

Revolving Light. A light or lamp in a light-house so arranged as to appear and disappear at fixed intervals, either by being turned about an axis so as to show light only at intervals, or by having its light occasionally intercepted by a revolving screen.

Reward. A recompense given for the performance of a meritorious or gallant act; as, the soldiers were rewarded with medals for their gallantry. In the U. S. service a reward of \$30 is paid for the apprehension of a deserter.

Rezonville. See GRAVELOTTE.

Rhagæ (ruins at Rai, southeast of Tehran). The greatest city of Media, lay in the extreme north of Great Media, at the southern foot of the mountains (Caspian Mons) which border the southern shores of the Caspian Sea. It was destroyed in the Parthian wars, but rebuilt by Arsaces; it was finally destroyed by the Tartars in the 12th century.

Rhegium (now Reggio). A celebrated Greek town on the coast of Bruttium, on the south of Italy, was situated on the straits which separate Italy and Sicily. Rhegium was founded about the beginning of the first Messonian war, 743 B.C., by Æolian Chalcidians from Eubœa, and by Doric Messenians, who had quitted their native country on the commencement of hostilities between Sparta and Messenia. Even before the Persian war Rhegium was sufficiently powerful to send 8000 of its citizens to the assistance of the Tarentines. Dionysius carried on war against the city for a long time, and after two or three unsuccessful attempts he at length took the place, which he treated with the greatest severity. The Rhegians having applied to Rome for assistance when Pyrrhus was in the south of Italy, the Romans placed in the town a garrison of 4000 soldiers, who had been levied among the Latin colonies in Campania. These troops seized the town in 279, killed or expelled the male inhabitants, and took possession of their wives and children. When Pyrrhus was driven out of Italy, the Romans took signal vengeance upon these Campanians, and restored the surviving Rhegians to their city.

Rheims, or Reims. A town of France, in the department of Marne, 82 miles east-northeast from Paris. The town was taken by the Russians in 1814, but before they had been in possession many hours Napoleon came down upon them, and gained here one of his last successes before victory deserted

his standards. Gen. MacMahon was at Rheims with his army, including the remains of the corps of Faily and Canrobert, and marched from here in hopes of joining Bazaine; the crown-prince of Prussia started in pursuit, August 23, 1870. It was occupied by the Germans and the king, September 5, 1870.

Rhin, Bas and Haut (Lower and Upper Rhine). Recently departments of France, which formed the former French province of Alsace. See ELZASS.

Rhine (anc. *Rhenus*, Ger. *Rhein*). An important river in Germany, and one of the most noted in Europe, takes its rise in the Swiss canton of Grisons, and after a north-northwest course of about 800 miles, falls in the German Ocean. Cæsar was the first Roman general who crossed the Rhine; he threw a bridge of boats across it. It was fortified as the frontier of the Roman empire 298 and 369, and became the boundary of the French republic in 1776.

Rhode Island. One of the original thirteen United States of America, and the smallest, on the southern coast of New England, is about 47 miles from north to south, and 37 miles from east to west. It is bounded north and east by Massachusetts, south by the Atlantic, and west by Connecticut. Rhode Island is believed to have been the Vineland of the Norsemen, who are supposed by some antiquarians to have explored this coast in the 10th century. It was settled in 1636 by Roger Williams and his companions, Baptists, who were expelled for their religious opinions from the Puritan colony of Plymouth. The colony suffered from the Indian wars until the defeat and death of Philip, king of the Wampanoags. Rhode Island took a prominent part in the Revolutionary war, and in the late civil war (1861-65) she filled her quotas cheerfully for the cause of the Union, her soldiers winning distinction and honor in the field.

Rhodes (Lat. *Rhodus*, Gr. *Rhodos*). An island of Asiatic Turkey, in the Mediterranean, off the southwest coast of Asia Minor, long an important, wealthy, and independent state of ancient Greece. At the beginning of the Peloponnesian war, Rhodes was one of those maritime states which were subject to Athens; but in the twentieth year of the war (412), it joined the Spartan alliance, and the oligarchal party, which had been depressed, and their leaders, the Eratidæ, expelled, recovered their former power under Dories. In 408 the capital, called Rhodus, was built. The history of the island now presents a series of conflicts between the democratical and oligarchal parties, and of subjection to Athens and Sparta in turn, till the end of the Social war, 355, when its independence was acknowledged. Then followed a conflict with the princes of Caria, during which the island was for a time subject to Artemisia. At the Macedonian conquest, they submitted to

Alexander; but upon his death they expelled the Macedonian garrison. In the ensuing wars they formed an alliance with Ptolemy, the son of Lagus, and their city, Rhodus, endured a most famous siege by the forces of Demetrius Poliorcetes, who at length, in admiration of the valor of the besieged, presented them with the engines he had used against the city, from the sale of which they defrayed the cost of the celebrated Colossus. The state now for a long time flourished with great maritime power. At length they came into connection with the Romans, whose alliance they joined in the war against Philip III. of Macedon. In the ensuing war with Antiochus, the Rhodians gave the Romans great aid with their fleet. A temporary interruption of their alliance with Rome was caused by their espousing the cause of Perseus, for which they were severely punished, 168; but they recovered the favor of Rome by the important naval aid they rendered in the Mithridatic war. In the civil wars they took part with Cæsar, and suffered in consequence from Cassius, 42. They were at length deprived of their independence by Claudius. In 1809 the island came into the possession of the Knights of St. John (see SAINT JOHN OF JERUSALEM), who baffled every effort made by Mahomet II., the conqueror of Constantinople, to drive them from the island, and held it until they were compelled to evacuate it by Solymán the Great in 1622, after one of the most memorable sieges recorded in history.

Rhoxolani, or Roxolani. A warlike people in European Sarmatia, on the coast of the Palus Mæotis, and between the Borysthènes and the Tanais, usually supposed to be the ancestors of the modern Russians. They frequently attacked and plundered the Roman provinces south of the Danube; and Hadrian was even obliged to pay them tribute. They are mentioned as late as the 11th century. They fought with lances, and with long swords wielded with both hands; and their armies were composed chiefly of cavalry.

Ribadoquin. An ancient 1- or 1½-pounder gun. Also, a powerful cross-bow for throwing long darts.

Ribaud (Fr.). A soldier of the foot-guards of Philip Augustus of France; but afterwards this term was applied only to the most infamous characters.

Ribaudaille (Fr.). A term of reproach formerly applied to cowardly soldiers. Philip of Valois thus called his Genoese mercenaries, who he thought had betrayed him.

Ribaudequin (Fr.). A warlike machine or instrument which the French formerly used. It was made in the form of a bow, containing 12 or 15 feet in its curve, and was fixed upon the wall of a fortified town, for the purpose of casting out a prodigious javelin, which sometimes killed several men at once. According to Monstrelet, a French

writer, *ribaudequin*, or *ribaudeurin*, signified a sort of garment which was worn by the soldiers when they took the field.

Ribbon. In heraldry, a diminutive of the ordinary called the *bend*, of which it is one-eighth in width.

Ribbon Cockades. In the British service, the cockades which are given to recruits, and are commonly called the *colors*.

Richmond. The capital of Virginia, on the left bank of the James River, at the head of the tide-water, 150 miles from its mouth, and 100 miles south of Washington. In June, 1861, it was selected as the Confederate capital, and from that period was the objective-point of a series of formidable military expeditions for its capture, under Gens. McDowell, McClellan, Burnside, Hooker, Meade, and Grant, and defended by Gen. Lee with a large army and formidable lines of fortifications, until the seizure of the lines of supply by Gens. Grant and Sheridan compelled its evacuation after a series of sanguinary battles, April 3, 1865. A considerable portion of the city was destroyed by the retreating Confederates.

Rickarees, Arickarees, or Rees. A tribe of Indians of the Pawnee stock living at Fort Berthold agency, on the Upper Missouri River; they warred with the Dakota tribes for a number of years, and were hostile to the whites; but were defeated and dispersed by U. S. troops in 1823; made a treaty in 1825; were driven up the Platte Valley, 1881; returned to the Missouri some years later. They numbered in 1876 about 700 souls.

Ricochet. In gunnery, the repeated rebounding of round-shot. By firing at a slight elevation, with small charges, in a direction enfilading the face of a work, shot are pitched over the parapet, and bound along the rampart from end to end, with most destructive effect on the guns and gunners occupying it.

Ricochet Battery. See BATTERY.

Ricochet Firing. See FIRE, RICOCHET.

Rideau. Is a rising ground, or eminence, commanding a plain, sometimes almost parallel to the works of a place. It is a great disadvantage to have rideaus near a fortification, which terminate on the counterscarp, especially when the enemy fire from afar; they not only command the place, but facilitate the enemy's approaches.

Rider. In artillery carriages, a piece of wood, which has more height than breadth; the length being equal to that of the body of the axle-tree, upon which the side-pieces rest in a four-wheel carriage, such as the ammunition-wagon, block-carriage, and sling-wagon.

Ridge. In fortification, is the highest part of the glacis proceeding from the salient angle of the covered way.

Riding-Master. In the British service, in cavalry, artillery, and the army service corps, is an officer whose duty it is to instruct the officers and men in the manage-

ment of their horses. He is most commonly selected from the ranks. The riding-master has the relative rank of lieutenant, and, after an aggregate service of thirty years, including at least fifteen years as riding-master, he has the right to retire on 10 shillings a day, with the honorary rank of captain. He is assisted in his duties by rough riders. (See **ROUGH RIDER**.)

Riff, The. A portion of the coast of Morocco which extends from Tangier on the west, to near the western frontier of Algeria. The name in the Berber language, which is that of the inhabitants, signifies a mountainous and rugged coast. The inhabitants of the Riff were formerly engaged in piracy. On account of the injuries inflicted by them on merchant vessels, most of the maritime states of Europe agreed to pay an annual sum of quit-money. However, in 1828, Austria declined further payment of the tax. A Venetian vessel was seized by the pirates in the harbor of Rabat, but the arrival of an Austrian fleet off the port produced restitution of the ship and its cargo, as well as the formal renunciation of all further claims. France followed the same course by declaring war against the sultan of Morocco, and obtained compensation in 1844, since which period piracy has much diminished. Its example was followed by the Spaniards in 1859.

Rifle. A fire-arm having a number of spiral grooves cut into the surface of its bore, for the purpose of giving the projectile a motion about a line coinciding with the direction of its flight. See **ORDNANCE, SMALL-ARMS, MAGAZINE GUNS, and LYMAN'S MULTI-CHARGE GUN.**

Rifle Projectile. See **PROJECTILE.**

Rifled Cannon, or Rifle-cannon. A cannon of which the bore is rifled.

Rifled Musket. A musket of which the bore is rifled.

Riflemen. A peculiar kind of light infantry, consisting of experienced marksmen, armed with the most improved rifles. In the British army there are two battalions of the rifle brigade and of the 60th Rifles, the Ceylon Rifles, and the Cape Mounted Riflemen.

Rifle-pit. A pit dug for the shelter of sharpshooters.

Rifling. The yielding nature of lead renders the application of the rifle principle of easy accomplishment in the case of rifle-muskets, but such is not the case with rifle-cannon where the projectiles are made of iron. The object of the most recent experiments is to determine the safest and surest means of causing the projectile to follow the spiral grooves as it passes along the bore of a rifled piece. For description of the manner of doing this, see **PROJECTILE.**

Form of Groove.—The form of a rifle groove is determined by the angle which the tangent at any point makes with the corresponding element of the bore. If the angles be equal at all points the groove is uniform.

If the increase from the breech to the muzzle, the grooves are called increasing; if the reverse, decreasing. The inclination of a rifle groove at any point is measured, accurately, by the tangent of the angle which it makes with the axis of the bore, which is always equal to the circumference of the bore divided by the length of a single revolution of the spiral, measured in the direction of the axis. Grooves are of two kinds, —*uniform and variable.*

Uniform Groove.—The comparative advantages of uniform and variable grooves depend on the means used to connect them with the projectiles. If the bearing of the projectile in the grooves be long, and the metal of which it is made be unyielding, it will be unsafe, if not impracticable, to employ variable grooves, and if the metal be partially yielding, a portion of the force of the charge will be expended in changing the form of that part of the projectile which projects into the grooves, as it moves along the bore.

Variable Groove.—The variable groove may be used to advantage when the portion of the projectile in the grooves is so short that its form will undergo but slight alteration; the variable groove diminishes the friction of the projectile when it is first set in motion, and thereby relieves the breech of the piece of a portion of the enormous strain which is thrown upon it. If the twist be too rapid towards the muzzle there will be danger of bursting the piece in the chase.

Width of Groove.—The width of a groove depends on the diameter of the bore and the peculiar manner in which the groove receives and holds the projectile. Wide and shallow grooves are more easily filled by the expanding portion of the projectile than those which are narrow and deep; and the same holds true of circular-shaped grooves when compared to those of angular form.

Number of Grooves.—An increase in the number of grooves increases the firmness with which a projectile is held, by adding to the number of points which bear upon it. A large number of grooves, however, increase the difficulties of loading. For expanding projectiles an odd number of grooves is generally employed, for as this places a groove opposite to a land, less expansion will be required to fill them.

Inclination of Grooves.—Experience has shown that, as the velocity of rotation depends upon the form and initial velocity of the projectile, the causes which retard it, and the time of flight, there is a particular inclination of grooves which is best suited to each caliber, form of projectile, charge of powder, and angle of fire. The farther the centre of gravity of a projectile is in rear of the centre of figure, or resistance of the air, the greater must be the inclination of the grooves to resist deviation. It therefore follows that a conical projectile of the same length and diameter, requires a greater inclination of grooves than a cylindrical pro-

jectile, and the same will hold true for other forms as they approach one or the other of these extreme cases. The friction of the projectile as it passes along the grooves, increases with their inclination; its effect will be to diminish the range and increase the strain on the piece, and the inclination may be carried so far as to break the projectile, or rupture the piece.

Centring.—In consequence of the windage necessary in all muzzle-loading guns, the axis of the projectile does not always coincide with that of the bore in firing. This leads to inaccuracy of fire. A projectile is said to be centred when the grooves of the rifling are so constructed as to bring the axis of the projectile on a line with that of the bore when the piece is fired. There are several ways of accomplishing this, among them Armstrong's method called "Shunt rifling." See **ARMSTRONG GUN** under **ORDNANCE, CONSTRUCTION OF**, the **KRUPP**, and others.

Riga. An important seaport of Russia, capital of Livonia, on the D  na, 312 miles southwest from St. Petersburg. Riga was founded in the beginning of the 13th century. The Teutonic Knights possessed it in the 16th century. In 1621 it was taken by Gustavus Adolphus, and in 1710, after a vigorous resistance, by Peter the Great. On the latter occasion more than half of the town was destroyed. In 1812 a French force was repulsed from the town.

Rigodon (Fr.). Formerly a beat of drum while men who were shelled (a French punishment, the severest next to death) were paraded up and down the ranks previous to their being sent to their destination.

Rimbases. In gunnery, are short cylinders uniting the trunnions with the body of the gun. The ends of the rimbases, or the *shoulders* of the trunnions, are planes perpendicular to the axis of the trunnions. Rimbases are for the purpose of strengthening the trunnions at their junction with the piece, and by forming shoulders, to prevent the piece from moving sideways in the trunnion-beds.

Rimer. A palisade in fortification.

Rimini (anc. *Ariminum*). A city of Central Italy, on the Adriatic Sea, about 28 miles east-southeast from Forli. It was founded by the Umbri; was conquered by the Romans; sacked by Sulla; plundered and destroyed several times by the barbarians; then given by Charlemagne to the church.

Rimnik. A town of Wallachia, on the Rimnik, 66 miles northeast from Bucharest. Here the Austrians and Russians, under Prince Coburg and Gen. Suwarrow, gained a great victory over the Turks, September 22, 1789.

Ring-armor. Armor composed of rings of metal.

Ringleader. The leader of a ring; especially, the leader of an association of men engaged in violation of law or an illegal enterprise, as rioters, mutineers, and the like.

Ring-mail. A kind of mail composed of small rings of steel sewed edgewise upon a strong garment of leather or of quilted cloth.

Ring-wads. See **GROMMET**.

Rio Janeiro, or Rio de Janeiro, often called simply **Rio**. The capital of Brazil, and the largest and most important city of South America. The harbor, which is strongly fortified, is one of the best in the world, and large enough for all its navies. The city of Rio was founded by the Portuguese in 1567. In 1881, it was the theatre of a revolution, in which 6000 armed citizens were joined by the troops of the line in their opposition to the government, and in consequence of which Dom Pedro abdicated the throne in favor of his son Pedro II.

Riot and Tumult. Sedition, civil insurrection, disturbance, etc. A breach of the peace committed by an assembled multitude. Some degree of violence is incidental to a riot, and a degree of intimidation to the neighborhood. According to law a riot cannot take place unless three persons act in concert. When a riot becomes formidable, it is usual for the authorities to take active measures to disperse it.

Rioters. Disturbers of the public peace; persons acting in open violation of good order; raising or creating sedition, etc.

Ripon. An ancient town of England, in Yorkshire, 23 miles northwest of York. It suffered much by the ravages of the Danes and the Normans (1060), and the Scots (1319 and 1323).

Risban (Fr.). In fortification, a flat piece of ground upon which a fort is constructed for the defense and security of a port or harbor. It likewise means the fort itself.

Risberme (Fr.). A work composed of fascines, such as is sometimes constructed at the bottom of a town-wall. A sort of glacis of fascine-work used in jetties, the sides of which, towards the sea, are so formed as to withstand its violence.

Rise. In a military sense, is to make hostile attack; as, the soldiers rose against their officers. It also means to obtain promotion. *To rise from the ranks*, is to obtain a commission by degrees, after having been in the ranks as a private soldier.

Rising. In heraldry, a term applied to a bird when represented opening his wings as if about to take flight.

Riveting-plates. In gun-carriages, are small, square, thin pieces of iron, through which the ends of the bolts pass, and are riveted upon them.

Rivoli. A town of Italy on the right of the river Dora, and 8 miles west of Turin. It possesses a royal castle, which was sacked by the French in 1690. In 1797 a battle was fought here between the French and Austrians, in which the former were victorious.

Rizamedar. In the East Indies, is an officer commanding a small body of horse.

Roanoke. A river of Virginia and North Carolina; empties into Albemarle Sound. In 1861, Albemarle Island, at its

mouth, and Plymouth were taken by the Federal gunboats.

Robinet. An ancient military machine for throwing darts and stones.

Rochelle, La. A fortified seaport of France, capital of the department of Charente-Inférieure, on an inlet of the Bay of Biscay, 800 miles southwest of Paris by railway. It was taken from the English by the troops of the French king Louis XIII. in 1224; was ceded to England at the treaty of Bretigny in 1360; in the subsequent wars it was retaken by France, under whose sway it has remained since 1372. As a stronghold of the Huguenot party, it underwent various attacks and sieges during the religious wars of the Henries, in the latter half of the 16th century; and on its final and unconditional surrender to the royal troops in the time of Louis XIII., its old fortifications were destroyed, and new lines of defenses subsequently erected by the great Vauban.

Rock Island. An island in the Mississippi River, the southern extremity of which is nearly opposite the town of Rock Island, Ill. This island is about 8 miles in length, and presents a perpendicular front of limestone 20 or 30 feet high. During the Black-hawk war a garrison was kept on Rock Island, and a part of it was used during the late civil war (1861-65) as a military prison. The U. S. government has a splendid arsenal and armory here.

Rocket. A rocket is a projectile which is set in motion by a force residing within itself; it therefore performs the twofold function of piece and projectile. See PYROTECHNY.

History.—Rockets were used in India and China for war purposes before the discovery of gunpowder; some writers fix the date of their invention about the close of the 9th century. Their inferior force and accuracy limited the sphere of their operations to incendiary purposes, until the year 1804, when Sir William Congreve turned his attention to their improvement. This officer substituted sheet-iron cases for those made of paper, which enabled him to use a more powerful composition; he made the guide-stick shorter and lighter, and removed a source of inaccuracy of flight by attaching the stick to the centre of the base instead of the side of the case. The advantages claimed for rockets over cannon are, unlimited size of projectile, portability, freedom from recoil, rapidity of discharge, and the terror which their noise and fiery trail produce on mounted troops.

Structure.—A rocket is essentially composed of a strong case of paper or wrought iron, inclosing a composition of nitre, charcoal, and sulphur,—the same as gunpowder, except that the ingredients are proportioned for a slower rate of combustion. If penetration and range be required, its head is surmounted by a solid shot; if explosion and incendiary effect, by a shell or spherical case-shot, to which is attached a fuze, which

is set on fire when it is reached by the flame of the burning composition. The base is perforated by one or more vents for the escape of the gas generated within, and sometimes with a screw-hole to which a guide-stick is fastened.

Motion.—A rocket is set in motion by the reaction of a rapid stream of gas escaping through its vents. If it be surrounded by a resisting medium, the atmosphere, for instance, the particles of gas as they issue from the vent will impinge against and set in motion certain particles of air, and the force expended on the inertia of these particles will react and increase the propelling force of the rocket. It follows, therefore, that, though a rocket will move *in vacuo*, its propelling force will be increased by the presence of a resisting medium. Whether the effect will be to accelerate the rocket depends upon the relation between the resistance which the medium offers to the motion of the gas and that which it offers to the motion of the rocket.

Vent.—As the rate of combustion of the composition is independent of the pressure of the gas in the bore, it follows, that if the size of the vent be contracted, the flow of gas through it will be accelerated. The strength of the case, and the friction of the gas, which increases as the vent diminishes, alone limit the reduction of the size of the vent. For vents of the same size, but of different shapes, that one which allows the gas to escape most freely will be most favorable to the flight of the rocket. A conical form of vent, with the larger orifice next to the bore, will allow the gas to escape more rapidly than one of cylindrical form.

Bore.—As the composition of a rocket burns in parallel layers of uniform thickness, the amount of gas generated in a given time, or the velocity of its exit from the case, depends on the extent of the inflamed surface. Experience shows that to obtain the required surface of inflammation, it is necessary to form a long cavity in the mass of the composition. This cavity is called the bore. In all rockets the bore should be concentric with the case; its shape should be made conical to diminish the strain on the case near its head, by reducing the amount of surface where the pressure on the unit of surface is greatest.

Nature of Movement.—Suppose the rocket in a state of rest, and the composition ignited; the flame immediately spreads over the surface of the bore, forming gas which issues from the vent. The escape is slow in the first moments, as the density of the gas is slight; but as the surface of inflammation is large compared to the size of the vent, the gas accumulates rapidly, and its density is increased until the velocity of the escape is sufficient to overcome the resistance which the rocket offers to motion. These resistances are, inertia, friction, the component of weight in the direction of motion, and, after motion takes place, the resistance

of the air. The constant pressure on the head of the bore accelerates the motion of the rocket until the resistance of the air equals the propelling force; after this, it will remain constant until the burning surface is sensibly diminished. When the gas ceases to flow, the rocket loses its distinctive character, and becomes, so far as its movement is concerned, an ordinary projectile. The increase in the surface of combustion whereby more gas is developed in the same time, and the diminution in the weight of the remaining composition, cause the point of maximum velocity to be reached with increased rapidity. If the weight of the rocket be increased, the instant of maximum velocity will be prolonged, but the amount will remain the same. A change in the form of the rocket which increases the resistance of the air, will have the effect to diminish the maximum velocity.

Guiding Principle.—The propelling force of a rocket changes its direction with the axis along which it acts; it follows, therefore, that without some means of giving stability to this axis, the path described will be very irregular, so much so, at times, as to fold upon itself; and instances have been known where these projectiles have returned to the point whence they started. The two means now used to give steadiness to the flight of a rocket are, rotation, as in the case of a rifle-ball, and the resistance of the air, as in an arrow.

Hale's System.—The first is exemplified in Hale's rocket, where rotation is produced around the long axis by the escape of the gas through five small vents situated obliquely to it. In his first arrangement, the inventor placed the small vents in the base, surrounding the central vent, so that the resultant of the tangential forces acted around the posterior extremity of the axis of rotation. In 1855, this arrangement was changed by reducing the number of the small vents to three, and placing them at the base of the head of the rocket. The rocket thus modified is the one now used by the U. S. government for war purposes. A still later improvement in Hale's rocket consists in screwing a cast-iron piece into the bottom of the case, which is perforated with three vents. A corresponding side of each vent is surrounded with a fence, the opposite sides being open. The gas in its efforts to expand after issuing from the vents, presses against the fences and rotates the rocket around its long axis.

Congreve's System.—A Congreve rocket is guided by a long wooden stick attached to its base. If any cause act to turn it from its proper direction, it will be opposed by resistances equal to its moment of inertia and the lateral action of the air against the stick. The effect of these resistances will be increased by placing the centre of gravity near the head of the rocket, and by increasing the surface of the stick. In signal-rockets, where the case is made of paper, the stick is

attached to the side, and there is but one large vent, which is in the centre of the case. In war-rockets the stick is attached to the centre of the base, and the large central vent is replaced by several small ones near its circumference. The former arrangement is not so favorable to accuracy as the latter, inasmuch as rotation will be produced if the force of propulsion and the resistance of the air do not act in the same line.

How Fired.—Rockets are generally fired from tubes or gutters; but should occasion require it, they may be fired directly from the ground, care being taken to raise the forward end by propping it up with a stick or stone. As the motion is slow in the first moments of its flight, it is more liable to be deviated from its proper direction at this time than any other; for this reason the conducting-tube should be as long as practicable.

Form of Trajectory.—Take that portion of the trajectory where the velocity is uniform. The weight of the rocket applied at its centre of gravity, and acting in a vertical direction, and the propelling force acting in the direction of its length, are two forces the oblique resultant of which moves the rocket parallel to itself; but the resistance of the air is oblique to this direction, and acting at the centre of figure, a point situated between the centre of gravity and extremity of the guide-stick, produces a rotation which raises the stick, and thereby changes the direction in which the gas acts. As these forces are constantly acting, it follows that each element of the trajectory has less inclination to the horizon than the element of an ordinary trajectory in which the velocity is equal. When the velocity is not uniform, the position of the centre of gravity has a certain influence on the form of the trajectory. To understand this, it is necessary to consider that the component of the resistance of the air which acts on the head of the rocket is greater than that which acts on the side of the stick. It is also necessary to consider that the pressure of the inflamed gas acts in a direction opposite to the resistance of the air, that is to say, from the rear to the front, and that the centre of gravity is near the rear extremity of the case. At the beginning of the trajectory, when the motion of the rocket is accelerated, its inertia is opposed to motion, and being applied at the centre of gravity, which is in rear of the vent, the point of application of the moving force, it acts to prevent the rocket from turning over in its flight. But when the composition is consumed, the centre of gravity is thrown farther to the rear, and the velocity of the rocket is retarded, the inertia acts in the opposite direction, and the effect will be, if the centre of gravity or inertia is sufficiently far to the rear, to cause it to turn over in the direction of its length. If the rocket be directed toward the earth, this turning over will be counteracted by the acceleration of velocity

due to the weight, and the form of the trajectory will be preserved.

Effect of Wind.—When the wind acts obliquely to the plane of fire, its component perpendicular to this plane acting at the centre of figure will cause the rocket to rotate around its centre of gravity. As the centre of figure is situated in rear of the centre of gravity, the point will be thrown toward the wind, and the propelling force acting always in the direction of the axis, the rocket will be urged toward the direction of the wind. To make an allowance for the wind in firing rockets, they should be pointed toward the opposite side from which the wind comes, or with the wind instead of against it. If the wind act in the plane of fire from front to rear, it will have the effect to depress the point, and with it the elements of the trajectory in the ascending branch, and elevate them in the descending branch; as the latter is shorter than the former, the effect of a front wind will be to diminish the range. The converse will be true for a rear wind.

Kind Used.—The two sizes of Hale's rockets in use in the American service are, the 2-inch (interior diameter of case), weighing 6 pounds, and 8-inch (interior diameter of case), weighing 16 pounds. Under an angle of from 4° to 5° the range of these rockets is from 500 to 600 yards. Under an angle of 47° the range of the former is 1760 yards, and the latter 2200.

Rocroy, or Rocroi. A small town of France, in the department of Ardennes, 15 miles northwest from Mézières. It is memorable for the victory gained by the great Condé (then duke of Enghien) over the Spaniards, May 19, 1643. The Spanish army was composed of veteran bands of Walloons, Spaniards, and Italians, and their general, Don Francisco de Mellos, was a commander worthy of his army. The French (22,000) were also good troops, but their general, Condé, was a young and inexperienced officer. At first the battle was unfavorable to the French, but at last the Spaniards were thrown into irretrievable rout. The Count of Fuentes, the commander of the redoubtable infantry, and 10,000 of his men were among the slain; and 5000 men, with all the cannon, many standards, and the baton of the Count de Mellos, were captured. But, far beyond all material losses, the renown of invincibility, first acquired by the Spanish infantry on the field of Pavia (1525), and confirmed at St. Quentin, Gravelines, and Prague, was destroyed.

Rodman Gun. See **ORDNANCE, CONSTRUCTION OF.**

Roermond. An old town in the Netherlands, province of Limburg, at the junction of the Roer and Mass. It has often endured the horrors of being besieged and taken.

Rogue River Indians. See **INDIANS AND THEIR AGENCIES (Oregon).**

Rogue's March. Derisive music performed in driving away a person under

popular indignation, or when a soldier is drummed out of a regiment.

Rohilcund. A region of Northeast India; was conquered by the Rohillas, an Afghan tribe, who settled here about 1747. After aiding the sovereign of Oude to overcome the Mahrattas, they were treated with much treachery by him, and nearly exterminated. Rohilcund was ceded to the British in 1801. After the great mutiny Rohilcund was tranquillized in July, 1858.

Rohillas. An East Indian tribe of Afghans inhabiting the country north of the Ganges, as far to the north as Oude.

Roi d'Armes (Fr.). King-at-arms, an officer formerly of great authority in armies; he directed the heralds, presided at their chapters, and had the jurisdiction of armories.

Roleia, or Rolica. A village in Portugal, where on August 17, 1808, a British force under Sir Arthur Wellesley defeated a French army under Gen. Laborde.

Roll. A term of varied signification in reference to military matters. Thus, to *roll* is to continue one uniform beat of the drum, without variations for a certain length of time.

Roll, Long. A prolonged roll of the drums, as a signal of an attack by the enemy, and for the troops to arrange themselves in line.

Roll, Muster. See **MUSTER-ROLL.**

Roll of Arms. A heraldic record of arms, either verbally blazoned or illuminated, or both, on a long strip of vellum, rolled up, instead of being folded into leaves.

Rolls of Arms are the most important and most authentic materials for the history of early heraldry. In England they go back to the reign of Henry III., the oldest being a copy of a roll of that reign, containing a list of the arms borne by the sovereign, the princes of the blood, and the principal barons and knights between 1216 and 1272, verbally blazoned without drawings.

Roll, Squad. Is a list containing the names of each particular squad in a company, etc.

Roll, Size. In the British service, is a list containing the names of all the men belonging to a troop or company, with the height or stature of each specifically marked.

Roll-call. The act or time of calling over a list of names; as, tattoo roll-call. *To call the roll*, to call off or recite a list or roll of names of soldiers belonging to a company or troop, in order to ascertain, from the responses, who are present and who are absent.

Rollers, Friction. See **ORDNANCE, CARRIAGES FOR, SEA-COAST CARRIAGES.**

Rolling Barrels. See **CAKING.**

Rolling Fire. A discharge of musketry by soldiers in line, in quick succession, and in the order in which they stand. See **FIRE.**

Rolling-hitch. Pass the end of a rope round a piece of timber; take it round a second time, riding the standing part; then carry it across and up through the bight.

Romagna. A province of the Papal States, comprised in the legations of Forlì and Ravenna. It was conquered by the Lombards; but taken from them by Pepin, and given to the pope, 753. Cæsar Borgia held it as a duchy in 1501, but lost it in 1503. In 1859 the Romagna threw off the temporal authority of the pope, and declared itself subject to the king of Sardinia, who accepted it in March, 1860. It now forms part of the kingdom of Italy.

Romainville and Belleville. Heights near Paris, where Joseph Bonaparte, Mortier, and Marmont were defeated by the allies after a vigorous resistance, March 30, 1814. The next day Paris capitulated.

Roman Candles. See PYROTECHNY.

Roman Walls. One was erected by Agricola (79 to 85) to defend Britain from the incursions of the Picts and Scots; the first wall extended from the Tyne to the Solway Frith (80 miles); the second from the Frith of Forth, near Edinburgh, to the Frith of Clyde, near Dumbarton (86 miles). The former was renewed and strengthened by the emperor Adrian (121) and by Septimius Severus (208). It commenced at Bowness, near Carlisle, and ended at Wallsend, near Newcastle. It had battlements and towers to contain soldiers. The more northern wall was renewed by Lollius Urbicus in the reign of Antoninus Pius, about 140. Many remains of these walls still exist, particularly of the southern one.

Romans. See ROME.

Rome (anc. *Roma*). The most celebrated city of the world, either in ancient or modern times, the capital of the Pontifical States, and the ecclesiastical metropolis of Catholic Christendom, is situated on the Tiber, 17 miles northeast of its mouth in the Mediterranean. Rome is said to have been a colony from Alba Longa and to have been founded by Romulus about 753 B.C.; it grew rapidly in size and power. Regal Rome ruled the whole Latin coast, and the treaties made with powerful Carthage, with Massilia, and with the Greeks of Southern Italy bear witness to the respect it enjoyed abroad. Royalty was abolished, and an aristocratical commonwealth established by the patricians, 509 B.C.; the Latins and the Tarquins declared war against the republic, 501; were defeated at the Lake Regillus, 496 B.C. Military tribunes were first created in 444 B.C. Rome was engaged in war with the Tuscans, 434 B.C.; the Aequi and Volsci were defeated by Tubertus, 431 B.C.; Veii was taken by Camillus after ten years' siege, 396 B.C. In 390 B.C. Rome was captured and burned by the Gauls; the vigilance of Marcus Manlius saved the Capitol. Again and again in the course of the 4th century B.C. the Gallic hordes repeated their incursions, but never again returned victorious. In 367 B.C. Camillus defeated them at Alba; in 360 B.C. they were routed at the Colline Gate; in 358 B.C. by the dictator G. Sulpicius Peticus; and in 350 B.C. by Lucius Furius Camillus.

By the middle of the 4th century B.C. the whole of Southern Etruria had submitted to the supremacy of Rome, and was kept in check by a Roman garrison; as was also the land of the Volsci. Becoming alarmed at the increasing power of Rome, the Latins and Hernicans withdrew from their league with Rome, and a severe and protracted struggle took place between them and their former ally. Nearly thirty years elapsed before the Romans succeeded in crushing the malcontents, and restoring the league of Spurius Cassius. In the course of this war the old Latin confederacy of the "Thirty Cities" was broken up, 384 B.C. Rome made a treaty with Carthage to repress Greek piracy, 348 B.C. Now commenced a tremendous struggle between the Samnites and the Romans; the former fighting heroically for the preservation of their national freedom,—the latter warring with superb valor for dominion. The Samnite wars, of which three are reckoned, extended over 53 years (343–290). The victory of the Romans at Sentinum (295 B.C.) virtually ended the struggle. At the close of the first Samnite war, an insurrection burst out among the Latins and Volscians, but the defeat inflicted on the insurgents at Trifanum (340 B.C.), by the Roman consul Titus Manlius Imperator Torquatus, almost instantly crushed it, and in two years almost the last spark of rebellion was extinguished. The famous Latin League was now dissolved. A mighty coalition was formed against Rome, consisting of Etruscans, Umbrians, and Gauls, in the north, and of Lucanians, Bruttians, and Samnites, in the south, with a sort of tacit understanding on the part of the Tarentines that they would render assistance by and by. In the course of a single year the whole north was in arms, and once more the power and even the existence of Rome were in deadly peril. An entire Roman army of 18,000 men was annihilated at Arretium (284 B.C.); but Publius Cornelius Dolabella marched into the country of the Senones at the head of a large force, and literally extirpated the whole nation, which henceforth disappears from history. Shortly afterwards, the bloody overthrow of the Etrusco-Boian horde at Lake Vadimo (283 B.C.) shattered to pieces the northern confederacy. The Lucanians were quickly overpowered (282 B.C.); Samnium, by its long and luckless struggle, and overawed by the proximity of a Roman army, could do nothing. The Tarentines invited Pyrrhus over from Epirus, and appointed him commander of their mercenaries; he arrived in Italy with a small army of his own, 280 B.C. The war between Pyrrhus and the Romans, which lasted only six years, ended in his being obliged to return to Epirus without accomplishing anything; this war led to the complete subjugation of Peninsular Italy by Rome. In 264 B.C. war was formally declared between Rome and Carthage, and it was incomparably the most terrible contest in which Rome was ever

engaged. For details of the Punic wars, see **CARTHAGE**, **NUMIDIA**, and **PUNIC WARS**. The leading feature of the *first* was the creation of a Roman navy, which, after repeated and tremendous misfortune, finally wrested from Carthage the sovereignty of the seas. A lapse of twenty-three years occurred before the *second* Punic war, during which interval the Romans bullied their weak and exhausted rival into surrendering Sardinia and Corsica. In addition they had carried on a series of Gallic wars in Northern Italy (281-222 B.C.), the result of which was the extension of Italy to the Alps. The Romans vigorously suppressed Illyrian piracy, 219 B.C. The grand events of the *second* Punic war were the crossing of the Alps by Hannibal, the terrible disasters of the Romans at Lake Trasimene (see **TRASIMENUS LACUS**) and Cannæ (which see), and the final overthrow of Hannibal at Zama (which see), 202 B.C., by Scipio. The *second* war virtually sealed the fate of Carthage, and the *third* displayed only the frantic heroism of despair. The imperial supremacy of Rome was now as unconditional in the western Mediterranean as on the mainland of Italy. During 201-196 B.C. the Celts in the valley of the Po were thoroughly subjugated. The Boii were finally extirpated about 198 B.C.; the Ligurians were subdued 180-177 B.C.; and the interior of Corsica and Sardinia about the same time. The wars in Spain were troublesome and of longer duration, but they were not at all serious. The Romans suffered frequent defeats, but in the end the superior discipline of the legions always prevailed. The Romans felt it necessary to hold Spain by military occupation, and hence arose the first Roman standing armies. The most distinguished successes were those achieved by Scipio himself, by Marcus Cato, by Lucius Æmilius Paulus, by Caius Calpurnius, by Quintus Fulvius Flaccus, and by Tiberius Gracchus. The Macedonian wars were owing immediately to the alliance formed by Philip V. of Macedon with Hannibal after the battle of Cannæ. The Macedonian wars were three in number. The *first* (214-205 B.C.) was barren in results; but the *second* (200-197 B.C.) taught Philip that another, not he, must rule in Greece. The battle of Cynoscephalæ was followed by a treaty which compelled him to withdraw his garrisons from the Greek cities, to surrender his fleet, and pay 1000 talents toward the expenses of the war. A similar fate befell Antiochus of Syria. Next the Ætolians were crushed, and a little later the quarrels between the Achæans and Spartans led to a general Roman protectorate over the whole of Greece. The *third* and last Macedonian war began 172 B.C.; the result of which, after four years' fighting, was the utter destruction of the Macedonian army at Pydna (168 B.C.), and the dismemberment of the Macedonian empire. The last Greek and Punic wars came to an end in the same year (146 B.C.). The for-

mer was virtually closed on the destruction of Corinth by the consul Mummius. For the results of the former, see **CARTHAGE**. The Celtiberian and Numantine war began 158 B.C., and ended in the final overthrow of the undisciplined and uncivilized combatants, 133 B.C. Toward the conclusion of the Numantine war occurred the first of those horrible Social outbreaks known as "servile" or "slave" wars, which marked the later ages of the republic. The first slave insurrection broke out in Sicily, 134 B.C. The slaves overran the island, like demoniacs let loose, and routed one Roman army after another. In 132 B.C., the consul Publius Rupilius restored order. After a fierce struggle, the Romans obtained the kingdom of Pergamus, and formed it into the province of Asia, 129 B.C. In Africa, the overthrow of Jugurtha by the consul Marius added further to the renown and strength of the republic. In 105 B.C. a Roman army of 80,000 was annihilated at Arausio on the Rhone, by the Cimbri (see **ARAUSIO** and **CIMBRI**). Marius nearly exterminated the Teutones at Aqua-Sextiæ (Aix, in Dauphin), 102 B.C., and in 101 B.C. the Cimbri at the Campi Raudii near Vercellæ. (See **CIMBRI** and **TEUTONIC**.) In the same year a second insurrection of the slaves in Sicily was suppressed by the consul Marius Aquilius. Now followed the Social war, 90-88 B.C. Then followed the fearful years of the "civil wars" between the two chiefs, Sulla and Marius. In 87 B.C. Rome was besieged by four armies (viz.: those of Marius, Cinna, Carbo, and Sertorius) and taken. In 88 B.C. broke out the "Mithridatic wars," which were three in number; begun by Sulla 88 B.C., they were brought to a successful close by Pompey, 65 B.C., although the general that had really broken the power of Mithridates was Lucullus. (See **MITHRIDATIC WAR**.) The result was the annexation of the sultanate of Pontus, which was formed into a Roman province. Then Pompey conquered Syria; reduced to a state of dependence Phœnicia, Cœle-Syria, and Palestine, 63 B.C. In the same year the conspiracy of Catiline was crushed by the consul Cicero. Then came the campaigns of Cæsar in Gaul (58-50 B.C.), by which the whole of the country was reduced to subjection; his rupture with Pompey; his defiance of the senate; the civil wars; his victory, dictatorship, and assassination; the second triumvirate, composed of Antony, Lepidus, and Octavian; the overthrow of the oligarchy at Philippi; the struggle between Antony and Octavian; the triumph of the latter, and his investment with absolute power for life as Augustus Cæsar, which put an end at least to civil dissensions that had raged so long. To keep the now enormous territory quiet which contained so many different races, an army of forty-seven legions and as many cohorts was maintained. The most notable incident during the reign of Tiberius was prob-

ably the concentration of the Prætorian guards in the vicinity of Rome, who, until their dissolution by Diocletian, were the real sovereigns of the empire. In Nero's time Armenia was wrested from the Parthians; the Roman authority in England was likewise extended as far north as the Trent, and a great rebellion in Gaul, against Nero, headed by Julius Vindex, was crushed by T. Virginus Rufus, the commander of the Germanic legions. The chief military events from the days of Vespasian to those of Marcus Aurelius, are final conquests of Britain by Agricola, the final conquest of the Dacian monarchy, the victorious invasion of Parthia and Northern Arabia; and the conquest of the valley of the Nile, as far south as Upper Nubia, by Trajan; the chastisement of the Marcomanni, Quadi, Chatti, etc., by Marcus Aurelius. The reign of Alexander Severus is marked by the downfall of the Parthian dynasty of Persian kings, and the rise of the native Sassanids (which see), which proved far more formidable enemies than the Parthian rulers. After the assassination of Severus (235 A.D.) followed a period of confusion, bloodshed, and general mismanagement. The names of Maximin, Maximus, Balbinus, Gordianus, and Philip recall nothing but wretched quarrels, often ending in assassination. Then followed the "beginning of the end." The whole of Europe beyond the Roman frontier—the mysterious North—began to ferment. The Franks appeared on the Lower Rhine, the Suabians on the Maine; while the Goths burst through Dacia, routed the forces of Decius, slew the emperor himself at Mount Hæmus, crossed the Euxine, and ravaged the whole northern coast of Asia Minor. A little later—during the reigns of Valerian, Gallienus, and the so-called Thirty Tyrants—the empire was nothing but a wild distracted chaos; Franks, Alemanni, Goths, and Persians rushing from their respective quarters like vultures scenting prey. The Goths swept over the whole of Achaia, while the Asiatic hordes of Sapor committed even greater havoc in Syria and Asia Minor. By Claudius Gothicus (268-270), and his successors, Aurelian, Probus, and Carus, the barbarians of the north and northwest, as well as the Persians in the East, were severely chastised. The division of the empire into East and West by Diocletian led to those labyrinthine confusions and civil wars, in which figure the names of Maximian, Constantius, Galerius, Maxentius, Maximin, Licinius, and Constantine, which were only brought to a close by the surpassing genius of the last mentioned. Julian's efforts to repel the incessant incursions of the Franks and Alemanni displayed a fine valor and generalship, and were crowned with success. But after the death of Julian the signs of the approaching dissolution of the empire became more unmistakable. Swarms of ferocious Huns drove the Goths out of Dacia, and forced them to

cross the Danube into the Roman territory, where they devastated the whole East from the Adriatic to the Euxine. They were subdued and disarmed by Theodosius. Hardly was Theodosius dead when they rose again, under their chief Alaric, against Honorius, emperor of the West. Three years earlier, hordes of Suevi, Burgundians, Alemanni, Vandals, and Alans burst into Gaul, which led to the invasion of Africa by Genseric. In the East the Huns had reduced vast regions to an utter desert; for nearly fifty years, indeed, the little ferocious demons had rioted in destruction. (See HUNS.) Eudoxia, the widow of Valentinian, to be revenged on Valentinian's murderer and successor, Petronius Maximus, invited Genseric, the "scourge of God," over from Africa, and exposed Rome to the horrors of pillage for fourteen days. Later, Odoacer, placing himself at the head of the barbarian mercenaries of the empire, overthrew the last, and the most ridiculous, occupant of the throne of the Cæsars (476), who, by a curious coincidence, bore the same name as the founder of the city,—Romulus. Rome was recovered for Justinian by Belisarius, 536; retaken by Totila the Goth, 546; recovered by Belisarius, 547; seized by Totila, 549; recovered by Narses and annexed to the Eastern empire, 558. Rome became independent under the popes about 728; was taken by Arnulf and the Germans, 896; taken by the emperor Henry IV., March, 1084. The pope removed to Avignon (1309-1377). Rome was then virtually left without a government, the Guelphs and the Ghibellines, Neapolitan and German armies, and the noble families of the Orsini and the Colonna being alternately masters. Cola di Rienzi, a man of the people, made himself master of Rome, 1347; it was captured and pillaged by the Constable of Bourbon, 1527; it was harassed by the French, German, and Spanish factions from the 16th to the 18th centuries; the French proclaimed a Roman republic, March 20, 1798; was recovered for the pope by the Neapolitans, 1799; retaken by the French, 1800; was restored to Pope Pius VII., 1801, and annexed by Napoleon to the kingdom of Italy, 1808. It was restored to the pope, January, 1814. In 1848 the people rose in rebellion, drove out Pius IX., and established a republic under the triumvirate of Mazzini, Armellini, and Saffi. An appeal to France brought once more a French army to the gates of the city, and the siege was begun. Rome was taken after a brave resistance in July, 1849. For twenty years French troops garrisoned the Eternal City, and when they were at last withdrawn (1870) Italy had become one great nation. After a brief resistance from the foreign papal troops, stopped by order of the pope, the Italian troops under Cadorna made a breach, and entered Rome amid enthusiastic acclamation of the people, September 20, 1870.

Rompu. In heraldry, a term applied to

a chevron when the upper part is taken off, and remains above it in the field.

Roncesvalles (Fr. *Roncevaux*). A small Spanish village, province of Navarre, in a narrow valley inclosed by lofty mountains, through which one of the principal roads leads from France across the Pyrenees into Spain. Here Charlemagne was attacked in 778 by the Basques, and his whole rear-guard destroyed. In honor of those who had fallen he built a chapel on the spot where the battle took place, and among the names enumerated in the inscription was that of Roland. In the modern French-Spanish wars, several bloody encounters (in 1798, 1794, and 1818) occurred in the same valley, and in 1833, Don Carlos was first proclaimed king here.

Rondache (Fr.). In ancient armory, a circular shield carried by foot-soldiers to protect the upper part of the person, having a slit in the upper part for seeing through, and another at the side for the point of the sword to pass through.

Rondel. In fortification, a round tower, sometimes erected at the foot of a bastion.

Rondelle (Fr.). A small round shield which was formerly used by light-armed infantry.

Rondellier (Fr.). Archer or pikeman who carried the *rondelle*.

Rondelle. See **ORDNANCE, CARRIAGES FOR, NOMENCLATURE OF ARTILLERY CARRIAGE**.

Ronfleurs (Fr.). Frederick the Great applied this name to some 12-pounders of 22 calibers, weighing 3200 pounds, which, before the battle of Leuthen, he had drawn from the neighboring fortress of Glogau. The charge for this gun was 6 pounds.

Rope. A large, stout, twisted cord, of not less, usually, than an inch in circumference. It differs from *cord*, *line*, and *string* only in its size. Ropes are ranked under two descriptions, *cable-laid* and *hawser-laid*; the former composed of nine strands, or three great strands, each consisting of three small ones; the latter made with three strands, each composed of a certain number of rope-yarns.

Rope, Drag-. See **DRAG-ROPE**.

Rope-ferries. See **PONTONS**.

Rose. In heraldry, is drawn in a conventional form, and never with a stalk, except when expressly directed by the words of blazon. Being sometimes argent and sometimes gules, it cannot be designated proper; but when blazoned "barbed and seeded proper," it is meant that the barbs are to be green, and the seeds gold and yellow. The rose gules was the badge of the Plantagenets of the house of Lancaster, and the rose argent of that of York. The York rose was sometimes surrounded with rays as of the sun, and termed *rose en soleil*. As a mark of cadency, the rose has been used as the difference of the seventh son.

Roses, Wars of the. A disastrous civil contest which desolated England during

thirty years, from 1455 to 1485, sacrificing 80 princes of the blood, and the larger proportion of the ancient nobility of the country. It was so called because the two factions into which the country was divided upheld the two several claims to the houses of York and Lancaster, whose badges were the white and red roses, respectively. After the house of Lancaster had possessed the throne for three generations (see **PLANTAGENET**), Richard, duke of York, whose title was superior to that of Henry VI., began to advance, at first somewhat covertly, his claim to the throne. In 1454, he was appointed protector of the realm during Henry's illness, and on the king's recovery he declined to give up his power, and levied an army to maintain it. The accession of Henry VII. may be said to have terminated the "wars of the roses," although the reign of Henry was from time to time disturbed by the pretensions of Yorkist impostors.

Rosetta. A seaport city of Egypt, near the mouth of a branch of the Nile. It was built by one of the Saracen caliphs in the 9th century. In 1798 this place was taken by the French, and in 1807 it was besieged by the British, who were repulsed by the Turks. The battle of the Nile was fought near Rosetta, August 1, 1798.

Rosettes. Two small bunches of ribbons, that were attached to the loops by which the gorget of an officer was suspended on his chest.

Roslin. A village of Scotland, 7 miles south of Edinburgh, on the Esk. In this neighborhood the Scots gained three victories over the English on the same day in 1302.

Ross, New. A town of Ireland, situated partly in the county of Wexford, and partly in the county of Kilkenny, 27 miles northwest from Wexford. New Ross was taken by Cromwell in 1649, and in 1798 a severe battle was fought here between the king's troops and the Irish insurgents.

Rosbach. A village of Prussian Saxony, in the government of Merseburg, celebrated for the victory here gained by the Prussians under Frederick the Great over the allied French and Austrian armies, November 5, 1757. The Prussians lost (according to a French account) only 300 men, while the loss of the allies was more than 1200 slain, 6000 prisoners, among whom were 11 generals and 800 officers, and 72 cannon, with many other trophies.

Roster, or Rollster. List of officers for duty. The principle which governs details for duty is from the eldest down; longest off duty first on duty. If an officer's tour of duty for armed service, court-martial, or fatigue, happen when he is upon either duty, he is credited therewith. An officer returning from duty after sickness, takes the same place he had on the post roster before reporting sick; that being sick on the day of detail he gets the credit of the tour and awaits the return of his day, when, if well, he is again detailed. An officer returning from leave

of absence is at once subject for detail. Customarily, an officer who returns from detached service is placed at the foot of the roster. The same rules should apply to non-commissioned officers and privates. A regiment or detachment detailed for any duty, receives credit for the duty when it marches off parade to perform the duty, but not if it is dismissed on parade. Officers on inlying pickets are subject to all details. In the British service, regiments proceed on foreign service according to the roster.

Rotterdam. An important commercial city in Holland, in the province of Southern Holland. Its importance dates from the 18th century; taken by the Spaniards by stratagem in 1672, and cruelly treated. It suffered much from the French revolutionary wars.

Rouen. A city in the north of France, the chief town of the department of the Lower Seine, and formerly the capital of Normandy, 68 miles northwest from Paris. It was held by the English till 1204; and was retaken by Henry V., January 19, 1419. Joan of Arc was burnt here, May 30, 1431. It was taken by Charles VII. of France in 1449; and by the Duke of Guise from the Huguenots, October, 1552, and in 1591.

Rough Rider. A non-commissioned officer in the British cavalry regiments, whose business it is to break in refractory horses, and assist the riding-master when required.

Rouleaux. Are round bundles of fascines, which are tied together. They serve to cover men when the works are pushed close to a besieged town, or to mask the head of a work.

Round. A general discharge of fire-arms by a body of troops, in which each soldier fires once. *Round of cartridges*, one cartridge to each man; as, to supply a regiment with a single round, or with twelve rounds.

Round, Gentleman of the. A gentleman soldier, but of low rank, only above the lance-pesade, whose office it was to visit and inspect the sentinels and advanced guards; also, one of a number of disbanded soldiers who had betaken themselves to the trade of begging.

Round Robin. This term is a corruption of *ruban rond*, which signifies a round ribbon. It was usual among French officers, when they signed a remonstrance, to write their names in a circular form, so that it was impossible to ascertain who signed first. Hence to sign a round robin against any person, was for any specific number of men to sign, one and all, a remonstrance against him.

Round Table, Knights of. Known in early English history as knights belonging to a celebrated order instituted by King Arthur, and whose exploits and adventures form the subjects of many ballads, and much of the early romantic poetry of England. The members of the order are said to have been 40 in number, and to have derived their name from their custom of sitting

about a large, round, marble table, in order to avoid all distinction of rank.

Roundel, or Roundelle. Was a shield used by the Norman soldiers. The word is also applied to the semicircular bastions in early fortification, as introduced by Albert Dürer. This bastion consisted of a semicircle of masonry about 800 feet in diameter, containing roomy casemates for the troops, and for artillery and musketry, with which the ditch and curtains were flanked.

Roundheads, The. In English history, a nickname given, in the reign of Charles I., to the Puritans, or Parliamentary party, who were accustomed to wear their hair cut close to the head. They were so called in opposition to the Cavaliers, or Royalists, who wore their hair in long ringlets.

Roundle, or Roundlet. In heraldry, a general name given to charges of a circular form, which in English heraldry have more special names indicative of their tinctures. A roundle or is called a *Bezant*; a roundle argent, a *Plate*; a roundle gules, a *Tortoise*; a roundle azure, a *Hurt*; a roundle sable, an *Ogress*, or *Pellet*; a roundle purple, a *Golpe*; a roundle sanguine, a *Guse*; a roundle tenney, an *Orange*. In the heraldry of Scotland and of the continent, it is, on the other hand, usual to design all roundles of metal bezants, and those of color, *tortoise*, adding the tincture. Thus the coat blazoned in England azure three plates, would be in the Scottish mode of blazon, azure three bezants argent.

Rounds. An officer or non-commissioned officer who, attended by one or more men, visits the sentinels in barracks, in order to ascertain whether they are vigilant. There are two sorts of rounds, *grand* and *visiting*. Grand rounds are the rounds which are gone by general officers, commandants, or field-officers. When there are no officers of the day, the officer of the main guard may go the grand rounds. The grand rounds generally go at midnight; the visiting rounds at intermediate periods, between sunset and reveille. The grand rounds receive the parole, and all other rounds give it to the guards. In officers' rounds the officer guarding is preceded by a drummer carrying a lantern, and followed by a sergeant and a file of men. Ordinary rounds consist of a sergeant and a file of men. Both ordinary and officers' rounds are termed visiting rounds. The design of *rounds* is not only to visit the guards, and keep the sentinels alert, but likewise to discover what passes in the outworks, and beyond them.

Rout. The confusion created in an army or body of troops when defeated or dispersed. *To put to the rout*, is to defeat and throw into confusion. The term expresses more than a defeat, because it implies a dispersion of the enemy's forces; for a defeated enemy may retreat in good order; but when routed, order and discipline are at an end.

Route. An open road; the course of march of troops. Instructions for the march

of detachments, specifying daily marches, means of supply, etc., are given from the headquarters of an army in the field, and are called marching routes.

Route Step. In tactics, is a style of march whereby the men carry their arms at will, keeping the muzzles elevated; they are not required to preserve silence, or to keep the step, but each man covers the file in his front. The ranks preserve the distance of 32 inches from each other. The route step is at the rate of from 2½ to 3 miles per hour.

Routine. This word has been adopted by us in the same sense that it is familiarly used by the French. It signifies capacity, or the faculty of arranging; a certain method in business, civil or military, which is as much acquired by habit and practice as by regular study and rule. We say familiarly the routine of business.

Rowel. The pointed part of a riding spur, which is made in a circular form, with rays or points like a star.

Royal. A small mortar which carries a shell whose diameter is 5.5 inches. It is mounted on a bed the same as other mortars.

Royal. In England, one of the soldiers of the first regiment of foot, called the *Royals*, and supposed to be the oldest regular corps in Europe.

Rubicon. A small stream of Central Italy, falling into the Adriatic, has obtained a proverbial celebrity from the well-known story of its passage by Cæsar, who by crossing this river—which, at the outbreak of the civil war between him and Pompey, formed the southern boundary of his province—virtually declared war against the republic. Hence the phrase to “cross the Rubicon” has come to mean, to take an irrevocable step.

Rudiments. The first principles, the elements of any particular science; as, the rudiments of war, which are the first principles or elements of war; as, marching, facing, wheeling; the drill, manual, and platoon exercises, manœuvres, etc.

Ruffle. Is a low vibrating sound, less loud than a roll, produced by drummers. It is used as a compliment to general officers and at military funerals.

Rugen. The largest of the islands of Germany, belongs to Prussia, and lies in the Baltic, off the coast of Pomerania. In 1169 it was conquered by the Danish king Waldemar I. By the peace of Westphalia it was ceded to Sweden, but in 1815 it was transferred to Prussia.

Rules and Articles of War. See APPENDIX, ARTICLES OF WAR.

Run. The greatest degree of swiftness in marching. It is executed upon the same principles as the *double-quick*, but with greater speed.

Run the Gantlope. See GANTLOPE.

Running Fight. A battle in which one party flees and the other pursues, but the party fleeing keeps up the contest.

Running Fire. A constant fire of musketry or cannon.

Rupture. This word signifies the commencement of hostilities between any two or more powers.

Rusellæ (*Rusellanus*; ruins near *Grosseto*). One of the most ancient cities of Etruria. It was taken by the Romans in 294 B.C., when 2000 of its inhabitants were slain, and as many more were made prisoners.

Rush. To move or drive forward with impetuosity, violence, and tumultuous rapidity; as, armies rush to battle. Also, a driving forward with eagerness and haste; as, a rush of troops.

Russia. The largest empire of the world, occupying about one-sixth of the firm land of our globe, bounded north by the Arctic Ocean, east by the Pacific, south by China, Independent Toorkistan, Persia, Asiatic Turkey, the Black Sea, and Roumania, and west by Austria, Prussia, the Baltic, and the Scandinavian peninsula. When the Greeks founded their commercial stations along the northern coast of the Black Sea, in the Crimea, and on the shores of the Sea of Azof, they found the interior occupied by roving tribes of a fierce and savage character. They called them Scythians and Sarmatians, and for about eight centuries these two nations continued to be mentioned in the history of Greece and Rome as inhabiting the same country, pursuing the same occupations, etc. Then came, during the migration of nations beginning in the 4th century, the Goths, Avars, Huns, Alans, etc., rolling over them wave after wave. In the 6th century the name of the Slaves first appears. They founded Kiev and Novgorod. The name of *Russians* is first met with in the 9th century. Rurik, a Varangian chief, came to Novgorod in 862, not as a conqueror, but invited, and henceforth his family reigned in the country till it became extinct, and the people received the name of Russians. His successor, Oleg (879–912), conquered Kiev, defeated the Khazars, and even attacked the emperor of Constantinople. In the beginning of the 13th century, the Mongols under Genghis Khan broke in from Asia; the Russians were unable to withstand them. Most of the princes were wholly subdued. The brilliant victories of Demetrius Donski, prince of Moscow, in 1387 and 1380, only caused the Mongols to return in larger hordes; in 1382, Moscow was burned to the ground and 24,000 of its inhabitants were slain. Ivan III. the Great (1462–1505), who united Novgorod, Perm, and Pskov to Moscow, refused to pay the tribute to the Mongols, defeated them when they attempted to enforce their claim by arms, and commenced extending the Russian power to the east, conquering Kazan in 1469, and parts of Siberia in 1499. Ivan IV., the Terrible (1533–84), conquered Astrakhan in 1554, the land of the Don Cossacks in 1570, Siberia in 1581, opened a road to Archangel in 1553, and organized in 1545 a body-guard, the famous *Streletzi*. With his son Feodor I. (1584–98) the house of Rurik ceased to exist,

and after a protracted and severe struggle between Boris Godunoff, Basil V., and the two pseudo-Demetriuses, who were supported by the Poles, Michael Feodorovitch Romanoff, the founder of the present dynasty, ascended the throne in 1612. Some progress was made under each of his successors,—Catharine I. (1725–27), Peter II. (1727–30), Anne (1730–41), Elizabeth (1741–62). Catharine II. (1762–76) carried on successful wars with Persia, Sweden, and Turkey, conquering the Crimea; she also acquired Courland and half of Poland. (For history regarding Poland, see **POLAND**.) Under Alexander I. (1801–25) Russia appears not only as one of the great powers, but as the true arbiter in European politics. In the Napoleonic wars he sided first with Austria, and was beaten at Austerlitz; then with Prussia, and was beaten at Friedland. By the peace of Fredrikshamn (1809) he obtained Finland from Sweden; by the peace of Bucharest (1812), Bessarabia and Moldavia from Turkey; and the war with Persia was successfully progressing when his friendship with Napoleon suddenly began to wane. A rupture took place, and now followed with fearful rapidity the invasion of Russia by Western Europe, the destruction of the grand army, and the overthrow of Napoleon. By the peace of Paris (1856) Russia lost its supremacy in the Black Sea. (See **CRIMEA**.) It only bided its time, however, and October 31, 1870, when neither England, France, nor Turkey was able to resist, Prince Gortschakoff informed the various cabinets that Russia felt compelled to deviate from the stipulations of the treaty of Paris, and keep a fleet of sufficient capacity in the Black Sea.

Russo-German War. The name given by German historians to the last stage of the great European war against Napoleon, beginning with the Russian campaign of 1812, and terminating on the field of Waterloo. For important battles, etc., see appropriate headings.

Russo-Turkish War. The name applied to the war which took place between Russia on one side, and Turkey, France, and Great Britain on the other; it commenced in 1858 and terminated in 1856. For important events of this war, see appropriate headings.

Rustre. In heraldry, one of the subordinaries, consisting of a *lozenge* with a circular opening pierced in its centre. Ancient armor was sometimes composed of rustres sewed on cloth.

Rustschuk. A fortified town of Turkey in Europe, in Bulgaria, situated at the influx of the Kara Lom into the Danube, 67 miles southwest from Silitria. Giurgevo (which see) is almost immediately opposite. The Russians took these towns in 1711 and 1810, but were defeated by the Turks, before Giurgevo, in 1854.

Rutuli. An ancient people in Italy, inhabiting a narrow slip of country on the east coast of Latium, a little to the south of the Tiber. They were subdued at an early period by the Romans, and disappeared from history.

Ryswick. A village in the province of South Holland, where the celebrated treaty of peace was concluded between England, France, Spain, and Holland, and was signed by their representatives, September 20, and by the emperor of Germany, October 30, 1697.

S.

Saalfeld. A town of Germany, in the duchy of Saxe-Meiningen, on the Saale, 23 miles south from Weimar. Here the Prussians under Prince Louis Frederick of Prussia were defeated and their leader slain by the French under Lannes, October 10, 1806.

Saarbrück (anc. *Augusti Muri*, or *Saræpons*). An open town on the left bank of the Saar, in Rhenish Prussia. It was founded in the 10th century, and was long subject to the bishops of Metz; it was afterwards ruled by counts (about 1237), and by the house of Nassau about 1380. It was captured by the French and retaken by the Germans, 1676; reunited to France, 1794–1814, and ceded to Prussia, 1815. On August 2, 1870, it was bombarded by the French under Frossard, and the Prussians in small force were dislodged, and the town occupied by the French

general Bataille. The emperor Napoleon and his son were present during this bombardment. On August 6, the Prussian generals Goeben and Von Steinmetz, with the first army, recaptured Saarbrück, after a sanguinary conflict at the village of Spicheren. The heights taken by the French on the 2d are in Germany, those taken by the Germans on the 6th are in France, and both battles were fought between Saarbrück and the town of Forbach, which was captured and has given a name to the second conflict. The loss was great on both sides. The French general François was killed, and the 2d Corps under Frossard nearly destroyed. The French retreated to Metz. They were greatly superior in numbers at the beginning of the fight, but were badly commanded.

Sabander. The familiar of *shah-bander*,

an Eastern title for captain or governor of a post.

Sabantines. Steel coverings for the feet; sometimes slippers or clogs.

Sabbatons. A round-toed armed covering for the feet, worn during a part of the 16th century.

Sabini. An ancient people of Central Italy, were generally supposed to have derived their name from Sabus, their chief tutelary deity. Their antiquity was very great. They were the parent-stock of many of the neighboring tribes, such as the Samnites, the Peligni, and the Picentes. The Sabini inhabited the mountain region lying to the northeast of Rome. They were a valiant warlike race, and at an early age of authentic history they issued from their mountain fastness and began a system of warlike aggression upon their neighbors. Gradually and by repeated attacks, their invading hordes subdued the aborigines, and advanced southward, occupying the land. At length, pushing their outposts to the very gates of Rome, they commenced to interfere with the affairs of that rising city. By victory or by compromise they gained admittance into the state upon very advantageous terms. They were not satisfied, but persisted in their encroachments upon the Roman territory, until defeated by Tullus Hostilius and by Tarquinius Priscus; however, they continued their raids until 449 B.C., when M. Horatius gave them a defeat which kept them quiet for more than a century and a half. They recovered in 290 B.C., only to be overthrown by Manlius Curius Dentatus with greater completeness than ever. They finally became a part of the Roman empire.

Sable. One of the tinctures in heraldry, implying black. In heraldic engravings, it is represented by perpendicular and horizontal lines crossing each other.

Sabot. Is a thick, circular disk of wood, to which, in fixed ammunition, the cartridge-bag and projectile are attached. For a spherical projectile, the sabot has a spherical cavity, and circular groove to which the cartridge-bag is tied; in the canister-sabot, the spherical cavity is omitted, and a circular offset is added. The effects of a sabot are: (1) To prevent the formation of a *lodgment* in the bore. (2) To moderate the action of the powder on the projectile; and, (3) To prevent the projectile from moving from its place. In consequence of the scattering of the fragments, it is dangerous to use the sabot in firing over the heads of one's own men. The term is also applied to the soft metal device attached to the base of rifled projectiles to take the grooves of the bore.

Sabre. A long curved or straight cavalry sword, with a broad and heavy blade, used for cutting and thrusting.

Sabre. To strike, cut, or kill with a sabre.

Sabretache (Ger. *Sabeltasche*, "sword-pocket"). A square pocket or pouch sus-

pended from the sword-belt on the left side, by three slings to correspond with the belt. It is usually scolloped at the bottom, has a device in the centre, and a broad lace round the edge. The color of it always corresponds with that of the uniform. The sabretache is an appointment or part of accoutrement of hussars in European armies.

Sabreur (Fr.). A blood-thirsty soldier; brave soldier.

Sabugal. A town of Portugal, on the Spanish frontier, where an affair took place between an English light division and the French, April 8, 1811, in which the latter were defeated.

Sac and Fox Indians. Two Algonkin tribes, who have always associated. They formerly dwelt in Canada, but afterward occupied a large tract of land on both sides of the Mississippi. The Sacs and Foxes often engaged in wars with the English, French, and Indians. They were gradually removed southwestward prior to 1849. There are now in the Indian Territory about 400 Sacs and Foxes. There are also about 200 Sacs and Foxes in Kansas, about 100 in Nebraska, and about 800 Sacs and Foxes in Iowa. See **FOX INDIANS**.

Sacæ. One of the most numerous and powerful of the Scythian nomad tribes, had their abodes in the steppes of Central Asia, which are now peopled by the *Kirghiz Khaksaks*. They were very warlike, and excelled especially as cavalry, and as archers, both on horse and foot. Their women shared in their military spirit; and according to *Ælian*, they had the custom of settling before marriage whether the man or woman should rule the house, by the result of a combat between them. In early times they extended their predatory incursions as far west as Armenia and Cappadocia. They were made tributary to the Persian empire, to the army of which they furnished a large force of cavalry and archers, who were among the best troops that the kings of Persia had.

Saccatoo, or Socoto. A kingdom of Soodan, in Central Africa. Its inhabitants, the Fellatas, first made their appearance as conquerors, coming from the west, apparently from the Senegal; they profess the Mohammedan religion. Othman, or Danfodio, one of the Fellata chieftains, marshaled his countrymen under his colors for a crusade against the unbelievers. Though at first defeated in almost every encounter, yet the warlike spirit of fanaticism grew so high that Othman obtained for himself an extensive empire. Under Alin, who ascended the throne in 1837, great internal disturbance took place, which brought the country into a wretched condition.

Sachem. A chief of a tribe of the American Indians; a sagamore. See **SAGAMORE**.

Sack. The pillage or plunder, as of a town or city; the storm and plunder of a town; devastation; ravage. Also, to plunder or pillage, as a town or city; to devastate; to ravage.

Sackage. The act of taking by storm and pillage; sack.

Sacker. One who sacks; one who captures and plunders a town.

Sackett's Harbor. A town in Jefferson Co., N. Y., on the south shore of Black River Bay, 8 miles east of Lake Ontario and 170 miles west-northwest of Albany, having a navy-yard, barracks, etc. In the war of 1812-15 it was an important port, where the frigate "Superior," of 66 guns, was built in eighty days, and the "Madison" in forty-five days, from timber standing in the forest. It is a military post of the United States named Madison Barracks, which is generally garrisoned by artillery.

Sacramento, St. A Portuguese settlement in South America, claimed by Spain in 1680; but relinquished in 1718; was several times seized; ceded in 1777; acquired by Brazil in 1826.

Sacramentum Militare (Lat.). The oath formerly taken by the Roman soldiers when they were enrolled. This oath was pronounced at the head of the legion, in an audible voice, by a soldier who was chosen by the tribune for that purpose. He thereby pledged himself before the gods to expose his life for the good and safety of the republic, to obey his superior officers, and never to absent himself without leave. The aggregate of the legion assented to the oath without going through the formal declaration of it.

Sacred Battalion. A band of infantry composed of 800 young Thebans, united in strict friendship and affection, who were engaged, under a particular oath, never to fly, but to defend each other to the last drop of their blood. At the famous battle of Leuctra, in which the Spartans were signally defeated by Epaminondas, the Sacred Battalion was commanded by Pelopidas, and mainly contributed to the success of the day.

Sacred Wars. (1) Declared by the Amphictyons against Cirrha, near Delphi, for robbery and outrage to the visitors to the oracle, 595 B.C. Cirrha was razed to the ground, 586 B.C. (2) Between the Phocians and Delphians for the possession of the temple at Delphi, 448, 447 B.C. (3) The Phocians, on being fined for cultivating the sacred lands, seized the temple, 357. They were conquered by Philip of Macedon, and their cities depopulated, 346 B.C.

Sacriportus. A small place in Latium, of uncertain site, memorable for the victory of Sulla over the younger Marius, 82 B.C.

Sacs and Foxes. See SAC AND FOX INDIANS.

Saddle. The seat which is put upon a horse for the accommodation of the rider. In the earlier ages the Romans used neither saddles nor stirrups. Saddles were in use in the 8d century, and are mentioned as made of leather in 804; they were known in England about 600. *Boots and saddles*, is a sound on the trumpet which is the first sig-

nal for mounted drill, and for all other formations mounted; it is also the signal for the trumpeters to assemble.

Saddle-bags. Bags, usually of leather, united by straps, for transportation on horseback, one bag being placed on each side. In the U. S. service saddle-bags are issued to the cavalry as a part of the horse equipments.

Saddle-cloth. In the military service is a cloth under a saddle, and extending out behind; the housing.

Saddler. One whose occupation is to make and repair saddles. Each company of cavalry in the U. S. service is allowed one saddler. Saddlers are also employed in the cavalry service of European countries.

Saddler Corporal. In the British service, is a non-commissioned officer who has charge of the saddlers in the Household Cavalry.

Saddler Sergeant. Is a sergeant in the cavalry who has charge of the saddlers. In the U. S. service, saddler sergeants are non-commissioned staff-officers, and one is allowed to each cavalry regiment.

Saddle-Tree Maker. An artificer in the cavalry who makes and repairs saddle-trees.

Sadowa. A village of Bohemia, about 8 miles from Königgratz. Here, on the morning of July 3, 1866, the Prussians attacked the Austrians, and after a desperate struggle of seven hours, the latter were defeated and driven from the village by the 7th division of the Prussian infantry. This engagement formed the prelude to the decisive battle of Königgratz.

Safe-conduct. A passport granted, on honor, to a foe, enabling him to pass where it would otherwise be impossible for him to go with impunity. Safe-conducts are granted in war for the purposes of conference, etc.; and to violate the provisions of such a pass has always been esteemed a disgraceful breach of the laws of honor.

Safeguard. A protection granted by the general of an army for the safety of an enemy's lands or persons, to preserve them from being insulted or plundered. For punishment of persons forcing a safeguard, see APPENDIX, ARTICLES OF WAR, 57.

Sagale, or Zagie. A dart or javelin used by the inhabitants of Madagascar.

Sagamore. The head of a tribe among the American Indians,—generally used as synonymous with *sachem*, but some writers distinguished between them, making the *sachem* a chief of the first rank, and a *sagamore* one of the second rank.

Sagette (Fr.). An arrow; a bolt used in ancient times.

Sagittarii. In the Roman army, under the emperors, were young men armed with bows and arrows, who, together with the *funditores*, were generally sent out to skirmish before the main body. They constituted no part of the *velites*, but seem to have succeeded them at the time when the Socii were admitted into the Roman legions; for at that period the *velites* were discontinued.

Sagra. A small river in Magna Græcia, on the southeast coast of Bruttium, on the banks of which a memorable victory was gained by 10,000 Locrians over 120,000 Crotoniats. This victory appeared so extraordinary that it gave rise to the proverbial expression, "It is truer than what happened on the Sagra," when a person wished to make any strong asseveration.

Sagum. An ancient military garment or cloak, made of wool, without sleeves, fastened by a girdle around the waist, and a buckle. It was worn by the Greeks, Romans, and Gauls. The generals alone wore the *paludamentum*, and all the Roman soldiers, even the centurions and tribunes, used the *sagum*.

Saguntum (now *Murviédro*). A wealthy and warlike town of ancient Spain, in Hispania Tarraconensis. It was besieged and destroyed by the Carthaginians under Hannibal in 218 B.C. Having withstood the siege for the greater part of a year, against an army of about 150,000 men, the Saguntines, now most severely pressed by famine, concluded, with an act of heroic defiance and self-sacrifice, a resistance that had been characterized by the most brilliant valor. Heaping their valuable effects into one vast pile, and placing their women and children around it, the men issued forth for the last time against the enemy; and the women, setting fire to the pile they had prepared, cast themselves upon it with their children, and found in flames the fate their husbands met in battle. The destruction of Saguntum directly led to the second Punic war.

Saikyr. In the Middle Ages, was a species of cannon smaller than a demiculverin, much employed in sieges. Like the falcon, it derived its name from a species of hawk.

Saint Augustine. A city, port of entry, and capital of St. John's Co., Fla., 160 miles south of Savannah. It has the distinction of being the oldest town in the United States. The Spanish abandoned it in 1763, upon its cession to the English. Sir Francis Drake destroyed it in 1586; and it was besieged and burned by the governor of the Carolinas in 1702. Saint Augustine was a British depot during the Revolutionary war. It was of some importance as a military station during the Florida war, 1835-42.

Saint Bartholomew, Massacre of. See BARTHOLOMEW, ST.

St. Bernard, Mount. See BERNARD, ST., THE GREAT.

Saint-Cloud. A town of France, department of Seine-et-Oise, 5½ miles west from Paris. Henry IV. was assassinated at Saint-Cloud by Jacques Clément in 1589. Bonaparte here broke up the assembly of 500, and caused himself to be proclaimed first consul on November 9, 1799; and here, in July, 1830, Charles X. signed the *ordonnances* which cost him his throne.

Saint-Dizier. See DIZIER, ST.-.

Saint Domingo. See DOMINGO, SAN, and HAYTI.

St. George, Grand Cross of. A Russian military honor, conferred on officers in the army and navy for distinguished bravery. It was conferred on the officer who sunk the Turkish monitor in May, 1877.

Saint-Germain-en-Laye. A town of France, in the department of the Seine-et-Oise, 14 miles west-northwest from Paris. The town, as well as the royal chateau, was sacked by the English in 1346, in 1419, and in 1488.

Saint Helena. See HELENA, SAINT.

Saint John of Jerusalem, The Order of the Knights Hospitallers of. Also called the Knights of Rhodes, and afterwards of Malta, the most celebrated of all the military and religious orders of the Middle Ages. It originated in 1048 in a hospital dedicated to St. John the Baptist, which was built for the reception of the pilgrims from Europe who visited the Holy Sepulchre. The nurses were at first known as the Hospitaller Brothers of St. John the Baptist of Jerusalem. The Seljuk (Seljook) Turks, who succeeded the Egyptian and Arabian Saracens in Palestine, plundered the hospice, and on the conquest of Jerusalem by the Crusaders under Geoffroy de Bouillon in 1099, the first superior, Gérard, was found in prison. Released from durance, he resumed his duties in the hospice, and was joined by several of the Crusaders, who devoted themselves to the service of the poor pilgrims. By advice of Gérard, the brethren took vows of poverty, chastity, and obedience before the Patriarch of Jerusalem. Pope Pascal II. gave his sanction to the institution in 1118. After Gérard's death in 1118, Raymond du Pay succeeded as superior of the order, and to the former obligations of the order he added those of fighting against the infidels and defending the Holy Sepulchre. Various Hospices, called *commanderies*, were established in different maritime towns of Europe. The order having become military as well as religious, was recruited by persons of high rank and influence, and wealth flowed in on it from all quarters. On the conquest of Jerusalem by Saladin in 1187, the Hospitallers retired to Margate, Phœnicia, whence the progress of infidel arms drove them first, in 1285, to Acre, and afterwards, in 1291, to Limisso, where Henry II., king of Cyprus, assigned them a residence. By the statutes of Raymond, the brethren consisted of three classes,—*knights*, *chaplains*, and *serving brothers*; these last being fighting squires, who followed the knights in their expeditions. The order was subsequently divided into eight languages,—Provence, Auvergne, France, Italy, Aragon, England, Germany, and Castile. Each nation possessed several Grand Priories, under which were a number of *commanderies*. The chief establishment in England was the Priory of Clerkenwell, whose head had a seat in the upper house of Parliament, and was styled first baron of England. In 1810, the knights, under their grand master, Foulkes de Villaret, in con-

junction with a party of Crusaders from Italy, captured Rhodes and seven adjacent islands from the Greek and Saracen pirates, by whom they were then occupied, and carried on from thence a successful war against the Saracens. In 1523, they were compelled to surrender Rhodes to the sultan Solymán, and retired first to Candia, and afterward to Viterbo. In 1530, Charles V. assigned them the island of Malta, with Tripolia and Gozo. The knights continued for some time to be a powerful bulwark against the Turks; but after the Reformation a moral degeneracy overspread the order, and it rapidly declined in political importance; and in 1798, through the treachery of some French knights and the cowardice of the grand master, D'Hompesch, Malta was surrendered to the French. The lands still belonging to the order were also about this time confiscated in almost all the European states; but though extinct as a sovereign body, the order has continued during the present century to drag on a lingering existence in some parts of Italy, as well as in Russia and Spain. Since 1801, the office of grand master has not been filled up; a deputy grand master has instead been appointed, who has his residence in Spain. The order at first wore a long black habit, with a pointed hood adorned with a cross of white silk, of the form called Maltese, on the left breast, as also a golden cross in the middle of the breast. In their military capacity, they wore red surcoats with a silver cross before and behind. The badge worn by all the knights is a Maltese cross, enameled white, and edged with gold; it is suspended by a black ribbon, and the embellishments attached to it differ in the different countries where the order still exists.

Saint Louis. A city of St. Louis Co., Mo., which stands on the right bank of the Mississippi, 18 miles below its confluence with the Missouri, and 174 miles above the mouth of the Ohio. In 1764, Saint Louis was the depot of the Louisiana Indian trading company; in 1768 it was captured by a detachment of Spanish troops; and in 1804 was ceded with the whole country west of the Mississippi to the United States. During the civil war a hostile camp of State militia was captured near the city, which enabled the Federals to secure the arsenal and a great store of arms, and eventual possession of the State of Missouri.

St. Lucia. An island in the West Indies, taken from the French in June, 1803, by the English troops under Gen. Greenfield.

Saint-Malo. See MALO. ST.

Saint Petersburg. See PETERSBURG, ST.

Saint-Quentin. A thriving town in the north of France, department of Aisne, is situated on the Somme, about 80 miles northeast of Paris. A battle was fought here August 10, 1557, between the Spaniards, assisted by a body of English troops, and the French, in which the latter were severely defeated. A battle took place here between the French under Faidherbe and the Ger-

mans under Von Goeben on January 19, 1871, in which the former were defeated, and the latter occupied Saint-Quentin.

Saint Regis. Situated partly in Bombay township, Franklin Co., N. Y., and partly in St. Regis township, Huntingdon Co., Quebec, Canada, on the St. Lawrence River, opposite Cornwall, with which it is connected by ferry. It is inhabited by the St. Regis Indians, an Iroquois tribe speaking the Mohawk dialect. They are divided into two parties, the British and the American, and owe their allegiance not according to residence, but according to descent in the female line. Their reservation in the United States is 14,000 acres, and that in Canada rather larger. Their ancestors settled here in 1760. The American party number about 700 souls, and the British about 800.

Saint Vincent, Cape. See CAPE ST. VINCENT.

Saintes. A town of France, in the department of the Lower Charente, situated on the left bank of the Charente. The English were defeated here in 1242, by the French king Louis IX., afterwards Saint Louis.

Saker (Fr. *sacre*, *saçret*). An ancient 4- or 5-pounder of 18 feet, weighing from 2500 to 2800 pounds. According to Tartaglia, the *sacre*, in 1548, was a 12-pounder of 9 feet, and weighing 2150 pounds; it was similar to the *aspic*, but longer.

Salade (Fr.). Helmet or kind of iron hat with a grated, movable visor, which was worn during the 15th century by foot-soldiers.

Saladin. At first the coat of arms was so called, because the Christians who conquered Palestine assumed it in imitation of the Turks, whose chief was at that time Saladin.

Salahieh (written also *Selahieh*). A town of Lower Egypt, 87 miles northeast of Belbeys. It was taken by the French in 1798, and again in 1800.

Salamanca (anc. *Salmantica*). A famous town of Spain, capital of the modern province of the same name, on the right bank of the Tormes, 50 miles east-northeast from Ciudad Rodrigo. It was taken by Hannibal. It was almost totally destroyed by the French in 1812. In its vicinity was won one of the most famous victories of the Peninsular war, by the British under Wellington against the French under Marmont, July 22, 1812.

Salapia (*Salapinus*; now *Salpi*). An ancient town of Apulia, was situated south of Sipontum. During the second Punic war it revolted to Hannibal after the battle of Cannæ, but it subsequently surrendered to the Romans and delivered to the latter the Carthaginian garrison.

Salassi. A brave and warlike people in Gallia Transpadana, in the valley of the Duria, at the foot of the Graian and Pennine Alps. They defended the passes of the Alps in their territory with such obstinacy and courage that it was long before the Ro-

mans were able to subdue them. At length in the reign of Augustus, the country was permanently occupied by Terrentius Varro with a powerful Roman force; most of the Salassi were destroyed in battle and the rest, amounting to 36,000, were sold as slaves.

Salenckemen. On the Danube; here a victory was gained by the Imperialists, under Prince Louis of Baden, over the Turks, commanded by the grand vizier Mustapha Kiuprigli, August 19, 1691.

Salentini, or Sallentini. A people in the southern part of Calabria, who dwelt around the promontory of Iapygium. They were subdued by the Romans at the conclusion of their war with Pyrrhus, and haying revolted in the second Punic war, were again easily reduced to subjection.

Salerno (anc. Salernum). A town of Naples, capital of the province of Principato Citra, 30 miles southeast from Naples. It was captured during the Social war by the Samnite general Papius. After the fall of the Western empire Salerno rose to its height. It passed first into the hands of the Goths, then into those of the Lombards, from whom it was taken by the Saracens in 905; but fifteen years after, it was recovered by the Greek emperor, and subsequently reverted to the Lombards. In 1076 Salerno was taken, after a siege of eight months, by Robert Guiscard; and thenceforward became the capital of the Norman possessions south of the Apennines. In 1198 the town was destroyed by the emperor Henry VI.

Salient. In heraldry, an attitude of a lion or other beast, differing but slightly from rampant. He is supposed to be in the act of springing on his prey, and both paws are elevated. Two animals *counter-salient* are represented as leaping in opposite directions.

Salient Places of Arms. In fortification, that part of the covered way which is opposite a salient of a bastion or demi-lune.

Sallet. The same as *salade* (which see).

Sally. A sudden offensive movement by the garrison of a fortified place, directed against the troops or works of the besiegers.

Sally-port. A gate or passage, by which the garrison of a fortress may make a sally or sudden attack on the besiegers. The name is applied to the postern leading from under the rampart into the ditch; but its more modern application is to a cutting through the glacis, by which a sally may be made from the covert way. When not in use, sally-ports are closed by massive gates of timber and iron.

Salsette. An island on the west coast of Hindostan, formerly separated from Bombay by a narrow channel 200 yards wide, across which a causeway was carried in 1805. Salsette formed part of the province of Aurangabad under the Mogul emperors, but fell into the hands of the Portuguese soon after their settlement in India. In 1739 it was conquered by the Mahrattas, and in 1774 it was taken by the British.

Saltant. In heraldry, in a leaping position, springing forward;—applied especially to the squirrel, weasel, rat, and also to the cat, greyhound, monkey, etc.

Saltillo. A city of Mexico, capital of the state of Coahuila, 250 miles west-southwest of Matamoras. Seven miles south is Buena Vista, famous for the battle fought there, February, 1847, when the Mexican forces were repulsed by an inferior U. S. army.

Salting-boxes. Were boxes of about 4 inches high, and 2½ inches in diameter, for holding meal powder, to sprinkle the fuzes of shells, that they might take fire from the blast of the powder in the chamber.

Saltire. One of the ordinaries in heraldry. Its name is of uncertain etymology, representing a bend sinister conjoined with a bend dexter, or a cross placed transversely like the letter X. Like the other ordinaries, it probably originated, as Planché suggests, in the clamps and braces of the shield. The form of the saltire has been assigned to the cross on which St. Andrew is said to have been crucified; hence the frequency of this ordinary in Scotch heraldry. A saltire is subject to the variations of being engrailed, invected, etc., and may be *couped*. When two or more saltires are borne in a shield, they are *couped*, not at right angles, but horizontally; and as they are always so treated, it is considered superfluous to blazon them as *couped*. Charges disposed in the form of a saltire are described as placed *saltireways*, or *in saltire*. The former term is more properly applied to two long charges, as swords or keys, placed across one another (in which case the rule is, that the sword in bend sinister should be uppermost, unless otherwise blazoned); and the latter to five charges placed two, one, and two.

Saltpetre. Nitre, or nitrate of potassa, is composed of 54 parts nitric acid and 48 parts of potassa. It is spontaneously generated in the soil, and is a necessary ingredient of powder. It has occasionally been produced artificially in *nitre-beds*, formed of a mixture of calcareous soil with animal matter; in these, nitrate of lime is slowly formed, which is extracted by lixiviation and carbonate of potash added to the solution, which gives rise to the formation of nitrate of potassa and carbonate of lime; the latter is precipitated; the former remains in solution and is obtained in crystals by evaporation. Its great use is in the manufacture of gunpowder, and in the production of nitric acid. See GUNPOWDER.

Salute. A discharge of artillery in compliment to some individual; beating of drums and dropping of colors for the same purpose; or by carrying or presenting arms according to the rank and position of an officer. A salute with cannon is a certain number of arms fired in succession with blank cartridges, in honor of a person, to celebrate an event, or to show respect to the flag of a country. The rapidity with which

the pieces are discharged depends upon their caliber. Field-guns should have intervals of five seconds between discharges; siege-guns, eight; and guns of heavier caliber, ten. The minimum number of pieces with which salutes can be fired is 2 for field, 4 for siege, and 6 for sea coast guns.

Personages entitled to salutes, if *passing* a military post, as also foreign ships of war, are saluted with guns of heavy caliber, the most suitable being the 10-inch smooth-bore. The United States *national* salute is one for each State composing the Union; and the *international* salute, or salute to the national flag, is 21 guns. The President of the United States and the sovereign or chief magistrate of a foreign state receive a salute of 21 guns, both upon arrival and final departure from a military post. Members of the royal family,—i.e., the heir-apparent and consort of the reigning sovereign of a foreign state,—21 guns. The Vice-President of the United States receives a salute of 19 guns. The following civil and diplomatic authorities receive salutes as follows: members of the Cabinet, the chief justice, the Speaker of the House of Representatives, the governors within their respective States or Territories, a committee of Congress officially visiting a military post or station, the viceroy, governor-general, or governors of provinces belonging to foreign states, ambassadors extraordinary and plenipotentiary, 17 guns; envoys extraordinary and ministers plenipotentiary, 15 guns; ministers resident accredited to the United States, 13 guns; *chargés d'affaires*, or subordinate diplomatic agents left in charge of missions in the United States, 11 guns. A general-in-chief, field-marshal, or admiral receives a salute of 17 guns; a lieutenant-general, or vice-admiral, 15 guns; a major-general, or rear-admiral, 13 guns; a brigadier-general, or commodore, 11 guns. The officers of volunteers and militia, when in the service of the United States, receive the salute specified for their rank. Officers of foreign services visiting any military post, are saluted in accordance with their rank. Salutes are fired only between *sunrise* and *sunset*, and, as a rule, never on Sunday. A national salute is to be fired at noon on the anniversary of the independence of the United States at each military post and camp provided with artillery and ammunition. The *international* salute is the only salute that is returned, and this should be done as soon as possible; foreign ships of war, in return for a similar compliment, gun for gun on notice being officially received of such intention. If there be several forts in sight of or within 6 miles of each other, the principal only shall reciprocate compliments with ships in passing. The President of the United States, the sovereign or chief magistrate of a foreign country traveling in a public capacity, is saluted when *passing* in the vicinity of a military post. Personal salutes at the same place and in compliment

to the same person, whether civil, diplomatic, military, or naval, are never to be fired oftener than once in twelve months, unless such person has, in the mean time, been advanced in rank.

Salvo. Is a concentrated fire from a greater or less number of pieces of artillery. Against a body of men, a salvo is generally useless, as the moral effect is greater in proportion to the area over which devastation is spread; but with fortifications the case is otherwise. For the purpose of breaching, the simultaneous concussion of a number of cannon-balls on masonry, or even earth-work, produces a very destructive result. The effect of a salvo of modern artillery, with its enormous steel shot, against iron-plated ramparts, has never yet been tried in actual war. The concentrated fire of a ship's broadside forms a powerful salvo.

Samanide Dynasty. Began with Ismail Samani, who overcame the army of the Saffarides, and established himself in the government of Persia, 902; his descendants ruled till 999.

Samarcand, or Samarkand (anc. *Mazacanda*). The most celebrated city of Central Asia, khanate of Bokhara, but annexed to the dominions of the czar in 1868. It is situated at the foot of Mount Chobanata, and is 145 miles nearly east by north from Bokhara. It was seized by the Arabs, 707, and from this time belonged either to the califate or to some of the dynasties which were offshoots from it, till 1219, when it was taken by Genghis Khan. In 1859 it was captured by Timour, and ten years afterward became the capital of his empire. On the division of his empire after his death, it continued the capital of Turkestan till 1468, when the attacks of the Uzbeks put an end to its prosperity.

Samaria. Anciently a city of Palestine, the chief seat of the Ephraimitic Baal-worship, and, from the seventh year of Omri's reign, the capital of the kingdom of Israel. It was twice besieged by the Syrians (901 and 892 B.C.), under Ahab and Joram, on both occasions unsuccessfully; but in 721 (720) B.C., it was stormed by Shalmaneser, king of Assyria, after a three years' siege, and the inhabitants carried off into captivity. Their place was supplied by colonists from Babylon and other places. It was subsequently captured by Alexander the Great, when the "Samaritan" inhabitants were driven out, and their place supplied by Syro-Macedonians. It was again taken (109 B.C.) by John Hyrcanus, who completely destroyed it. Soon rebuilt, it remained for fifty years in possession of the Jews; but Pompey, in his victorious march, restored it to the descendants of the expelled Samaritans, who had settled in the neighborhood, and it was re-fortified by Gabinius. Its name was changed to Sebaste by Herod the Great. In the 3d century it became a Roman colony; but its prosperity perished with the Mohammedan

conquest of Palestine, and is at present only a small village called Sebastieh, an Arab corruption of Sebaste.

Sambas. A town on the west coast of Borneo. It was attacked in 1812 and 1813 by the British, who were repulsed in their first attempt, but succeeded in capturing the town at the second attack.

Sambre. A river of French Flanders, which has been the scene of many sanguinary conflicts at different periods. It arises in the Ardennes, between La Capelle and Chateaux-Cambressis; runs from southwest to northeast; washes Landrecy, a fortified town, which was taken by the Imperialists in 1798. In its vicinity is Troisville, where, in 1794, the French were defeated by the British under the Duke of York. Maubeuge is situated in advance of the forest of Mormal. It was fortified by Vauban, and has a manufactory of fire-arms, and a garrison of infantry and cavalry. It was vainly besieged by the allies in 1814. Near it is Wattignies, where Jourdan beat the Austrians in 1813, and compelled them to raise the siege of Maubeuge. From hence the Sambre flows out of France, and passing into Belgium, washes Charleroi, a fortified place, captured by the French in 1672, 1677, 1693, 1786, 1792, and 1794. It leaves upon the heights on its right bank, Fleurus, a place rendered famous by four remarkable battles,—that of 1622, gained by the Spaniards over the Protestants of Germany; that of 1690, gained by Luxemburg over the Imperialists; the battle of 1794, gained by Jourdan over the allies; and the battle of 1815 (also designated the battle of Ligny), gained by Napoleon over the Prussians. The battle of 1794 was preceded by the siege of Charleroi, during which the French had six times crossed the Sambre in vain, and had been repulsed in six battles, the most celebrated of which are those of Grandreng, of the Pêchant, and of Marchienne.

Sambuque (*Fr.*) An ancient musical instrument of the wind kind, resembling a flute. It was also the name of an ancient engine of war used by Marcellus in besieging Syracuse. Plutarch relates that two ships were required to carry it. A minute description of this engine may be seen in Polybius.

Same, or Samos (anc. *Cephalenia*). A town situated on the eastern coast, opposite Ithaca; was taken and destroyed by the Romans, 139 B.C.

Samnites. The people of ancient Samnium, a country of Central Italy. They were an offshoot of the Sabines, who emigrated from their country between the Nar and Tiber, and the Anio, before the foundation of Rome, and settled in Samnium. This country was at the time of their migration inhabited by Opicans, whom the Samnites conquered, and whose language they adopted. The Samnites were distinguished for their bravery and love of free-

dom. Issuing from their mountain fastnesses, they overran a great part of Campania; and it was in consequence of Capua applying to the Romans for assistance against the Samnites that war broke out between the two nations in 343 B.C. The Romans found the Samnites the most warlike and formidable enemies whom they had yet encountered in Italy, and the war, which commenced in 343, was continued with few interruptions for the space of fifty-three years. It was not until 290, when all their bravest troops had fallen, and their country had been repeatedly ravaged in every direction by the Roman legions, that the Samnites sued for peace and submitted to the supremacy of Rome. They, never, however, lost their love of freedom; and, accordingly, they not only joined the other Italian allies in the war against Rome (90), but, even after the other allies had submitted, they still continued in arms. The civil war between Marius and Sulla gave them hopes of recovering their independence; but they were defeated before the gates of Rome (82), the greater part of their troops fell in battle, and the remainder were put to death. Their towns were laid waste, the inhabitants sold as slaves, and their place supplied by Roman colonists.

Samos. An island on the west coast of Asia Minor, which was colonized by Ionians about 1043 B.C. Samos was taken by the Athenians, 440; and, with Greece, became subject to Rome, 146. It was taken by the Venetians, 1126; taken by the emperor Leo in the 13th century, and then successively fell into the hands of the Venetians, Genoese, and Turks. At the time of the Greek insurrection the Samians zealously embraced the side of liberty. They expelled the Turks from the island, which they put into a state of defense, establishing an independent government. Various attempts were made by the Turks to regain the island, but they were all foiled by the courage of the people and the vigilance of the Greek fleet. In the treaty, however, which secured the independence and defined the limits of Greece, Samos was still left to Turkey, and the subsequent efforts that she has made have only secured a partial freedom.

San Antonio, called also **San Antonio de Bexar.** A city of Texas, U. S., is built near the sources of the San Antonio River, 110 miles southwest of Austin. It is one of the oldest Spanish towns on the continent, and in the Texan revolution of 1836 was the scene of the massacre of the Alamo, when a garrison of 150 men, led by Col. Travis, and including David Crockett, was surrounded by several thousand Mexicans, and after a heroic resistance killed to the last man. It contains a national arsenal.

San Jacinto. A small village of Harris Co., Texas, on Buffalo Bayou, near its entrance into Galveston Bay, about 18 miles east of Houston. On April 21, 1836, the main Texan army under Gen. Houston met

the Mexicans, who were double their number, near San Jacinto. Furiously the Texans rushed to battle, with the cry, "Remember the Alamo!" They fought at less than half-rifle distance, and in less than half an hour wholly routed the Mexicans, killing and wounding a number greater than the whole Texan force. Among the prisoners taken after the battle was Santa Anna himself. The result of this battle was the undisputed independence of Texas.

San Salvador. The smallest of the Central American republics, and consists of a strip of territory stretching along between Honduras and the Pacific, and bounded on the west by Guatemala, and on the east by Fonseca Bay. It was conquered after a long and obstinate contest by Pedro de Alvarado, a lieutenant of Cortez. In 1821 it threw off the yoke, and joined the Mexican Confederation, from which, however, it seceded in 1823. In 1863, a war broke out between San Salvador and Guatemala, in which Honduras joined the former and Nicaragua the latter. The result was the defeat of San Salvador.

San Sebastian. A seaport of Spain, capital of Guipuzcoa, one of the Basque provinces, on the shore of the Bay of Biscay, 42 miles north-northwest of Pampeluna. From its position and strength, it has long been a place of much importance, and has sustained several sieges. The most memorable of these was in 1813, when the British under Wellington took it by storm.

San Severo. A town of Naples, capital of a district in the province of Capitanata. The inhabitants in 1799 made a gallant but vain resistance to the French under Duhesme, in revenge for which an indiscriminate slaughter was begun, and the town was only saved from total destruction by the heroism of the women, who threw themselves between the victorious soldiery and their victims.

Sandhurst Military College. See MILITARY ACADEMIES (GREAT BRITAIN).

Sangiac. A situation or appointment of dignity in Turkey. The sangiacs are governors of towns or cantons, and take rank immediately after the *beglerbegs*. (See Bkg.) The name is also applied to the banner which he is authorized to display, and has been mistaken for Saint Jacques.

Sanjak. A Turkish word signifying "a standard," is employed to denote a subdivision of an *eyalet*, because the ruler of such a subdivision, called *sanjak-beg*, is entitled to carry in war a standard of one horse-tail. The sanjak is frequently called *liva*, and its ruler a *mirmiram*.

Sanjak-Sherif. See FLAG OF THE PROPHET.

Sansculottes (i.e., "without breeches"). Was the name given in scorn, at the beginning of the French revolution, by the court party to the democratic "proletaires" of Paris. The latter accepted this superfine reproach with sardonic pride, and the term

soon became the distinctive appellation of a "good patriot," more especially as such a one often made a point of showing his contempt for the rich by neglecting his apparel, and cultivating rough and cynical manners. Toward the close of the Convention, the name, connected as it had been with all the sanguinary excesses of the period, naturally fell into bad odor, and soon after totally disappeared.

Santa Fé. City and capital of the Territory of New Mexico, built among the Rocky Mountains, on a plain 7047 feet above the sea. It is an old Spanish Mexican town, about 20 miles east of the Rio Grande del Norte. The Spaniards were driven out of Santa Fé in 1680 by the Pueblo Indians; but it was recaptured by the former in 1694, and held by them till the occupation by Americans in 1846. It was occupied by the Confederates for several days in 1862.

Santiago de Compostella. An important and once famous city of Spain, formerly the capital of Galicia. It was sacked by the Moors in 995, and held by them till it was taken by Ferdinand III. in 1285. It was taken by the French in 1809, and held till 1814.

Sap. In military engineering, is a narrow ditch or trench, by which approach is made from the foremost parallel towards the glacis or covert way of a besieged place. The sap is usually made by four sappers, the leading man of whom rolls a large gabion before him, and excavates as he progresses, filling smaller gabions with the earth dug out, and erecting them on one or both sides to form a parapet. The other sappers widen and deepen the sap, throwing more earth on to the parapet. A sap is considered to advance in average ground about 8 feet per hour. From the nearness of the enemy's works, running a sap is an extremely dangerous operation. When possible, therefore, it is carried on at night; in any case, the sappers are relieved at least every hour. When a sap is enlarged to the dimensions of a trench, it bears that name. When the fire of the enemy is slack, so that many gabions may be placed and filled at the same time, it is called a *flying sap*. If two parapets, one on each side of the trench, be formed, it is then called a *double sap*.

Sap. To pierce with saps; to execute saps. Also, to proceed by mining or secretly undermining.

Sap-fagots. Are fascines 8 feet long, placed vertically between two gabions, for the protection of the sappers before the parapet is thrown over.

Sappers and Miners. Are soldiers belonging to the engineer corps, and now called engineers, whose business it is to make gabions, fascines, hurdles, etc., to trace lines and trenches, to drive the various kinds of saps, to descend into and pass the ditch, to destroy the enemy's obstacles, to drain the trenches, to put up the various kinds of revetments, to post and superintend working

parties, and to serve in the mines when required. They are also taught to adjust and sod the slopes, to erect palisades, fraises, etc., and to repair the defenses of a place, as also to erect bridges, and throw pontoons over rivers, to plant torpedoes, and in fact to perform all the duties appertaining to engineer soldiers. In marching near an enemy, every column should have with its advance-guard a detachment of sappers, furnished with tools to open the way or repair the road. Bonaparte considered the proper proportion of engineer soldiers to an army to be 1:40; but now in France it is 1:38; in England 1:34; in Prussia 1:36; and in the United States 1:60.

Sapping. The art of excavating trenches of approach, under the musketry-fire of the besieged.

Sap-roller. Consists of two large concentric gabions, 6 feet in length, the outer one having a diameter of 4 feet, the inner one a diameter of 2 feet 8 inches, the space between them being stuffed with pickets or small billets of hard wood, to make them musket-shot proof. Its use is to protect the squad of sappers in their approach from the fire of the place.

Saracens. A name variously employed by mediæval writers to designate the Mohammedans of Syria and Palestine, the Arabs generally, or the Arab-Berber races of Northern Africa, who conquered Spain and Sicily, and invaded France. At a later date it was employed as a synonym for all infidel nations against which crusades were preached, and was thus applied to the Seljuks of Iconium, the Turks, and even to the pagan Prussians.

Saracen's Head. A not unfrequent bearing in heraldry. It is represented as the head of an old man with a savage countenance.

Saragossa, or Zaragoza. A city of Spain, the capital of a province of the same name, and formerly of the kingdom of Aragon. It is situated on the Ebro, which divides the city into two parts. It was a place of importance under the Romans, but there are few remains of the Roman city. It was taken by the Moors in the 8th century, and recovered from them in 1118, after a siege of five years, during which a great part of the inhabitants died of hunger. It was taken by the French in 1809, after a siege of eight months, and one of the most heroic defenses recorded in the history of modern warfare.

Saratoga. A township of Saratoga Co., N. Y., situated on the Hudson, 28 miles north from Albany. It is remarkable in American history as the place where Burgoyne surrendered to the Americans in 1777. From September 19 to October 7 frequent animated skirmishes occurred between the British and the Americans, but on the latter date the battle of Saratoga began. Gen. Gates drew up his army on the brow of a hill, near the river, his camp being in the

segment of a large circle, the convex side towards the enemy. Gen. Burgoyne's troops were drawn up with his left resting on the river, his right extending at right angles to it across the low grounds, about 200 yards, to a range of steep heights. The Americans attacked the British along their whole line, when the action became general. The efforts of the combatants were desperate. Burgoyne and his officers fought like men who were defending, at the last cast, their military reputation; Gates and his army like those who were deciding whether themselves and their children should be freedmen or slaves. The invading army gave way in the short space of fifty-two minutes. The defenders of the soil followed them to their intrenchments, forced the guard and killed its commander. The works of the British were stormed, but darkness coming on, the Americans desisted, and rested on their arms upon the field which they had so bravely won, determined to pursue their victory with returning light. But Burgoyne, aware of the advantage which the Americans had gained, effected with admirable order a change of his ground. His entire camp was removed before morning to the heights. Gates was too wise to attack his enemy in his new position, but made arrangements to inclose them, which Burgoyne perceiving, put his army in motion at 9 o'clock at night and removed to Saratoga, 6 miles up the river, abandoning his sick and wounded to the humanity of the Americans. Burgoyne now made several efforts to effect a retreat; but in every way he had been anticipated. He found himself in a foreign and hostile country, hemmed in by a foe whose army, constantly increasing, already amounted to four times his own wasted numbers. His boats laden with supplies were taken, and his provisions were failing, and when he found he could not hold out any longer, his troops being in the utmost distress, he surrendered on October 17. The whole number surrendered amounted to 5752 men, which, together with the troops lost before by various disasters, made up the whole British loss to 9218 men. There also fell into the hands of the Americans 85 field-pieces and 5000 muskets. It was stipulated that the British should pile their arms at the word of command, given by their own officers, march out of their camp with the honors of war, and have free passage across the Atlantic; they, on their part, agreeing not to serve again in North America during the war.

Sarawak. A town and province of Borneo, on the northeast coast of the island. The Chinese inhabitants of this place rose in insurrection and massacred a number of Europeans, February 17 and 18, 1857; the rajah, Sir J. Brooke, raised a force and speedily chastised the insurgents, of whom 2000 were killed.

Sarbacane (*Fr.*). A blow-pipe, or long tube of wood or metal, through which poi-

soned arrows were shot by blowing with the mouth.

Sarceled. In heraldry, cut through the middle.

Sardar. In the East Indies, a chief or leader is so called.

Sardinia. A former kingdom in the south of Europe, composed of the island of Sardinia, Piedmont, Savoy, and the territories of Genoa and Nice. It takes its name from the island of Sardinia, and was, in 1860, merged in the new kingdom of Italy. From 1798 to 1814 the continental part of Sardinia formed a portion of the French empire. In 1848, Charles Albert, the reigning monarch, encouraged the inhabitants of the Lombardo-Venetian kingdom, or Austrian Italy, in their attempts to throw off the Austrian yoke, and marched to their assistance, when they broke into open revolt. He gained many victories at first over the Austrians, but he was subsequently defeated by Radetzky, and resigned his crown to his son, Victor Emmanuel. In 1855 Sardinia took part with Britain and France against Russia. In 1859 a war broke out between Austria on the one hand, and France and Sardinia on the other, which resulted in the defeat of the Austrians and the annexation of Lombardy to the Sardinian crown.

Sardinia, Island of. The largest after Sicily, of the islands of the Mediterranean, lies directly south of Corsica, from which it is separated by the Strait of Bonifacio. It was called *Sardo* by the Romans, and was colonized at a very early period. The first really historical event is its conquest, about 480 B.C., by the Carthaginians. They were forced to abandon it to the Romans (238 B.C.), who gradually subdued the rebellious natives, and made it a province of the republic; but on three several occasions, formidable outbreaks required the presence of a consul with a large army to restore the authority of Rome. It fell into the hands of the Vandals and other barbarians, and was recovered by the Eastern empire in 534, but was finally separated from the Roman empire by the Saracens. They were driven out in their turn by the Pisans. Pope Boniface took upon him to transfer it to the king of Aragon, who subdued the Genoese, Pisans, and the rest of the inhabitants, and annexed it to his own dominions in 1824. It remained united to the crown of Spain till the allies made a conquest of it in 1708. It was allotted to the emperor of Germany at the peace of Utrecht, in 1713. The Spaniards recovered it in 1717, but were obliged to abandon it two years after, when it was conferred on the duke of Savoy in lieu of the kingdom of Sicily, in 1720. From 1798 to 1814 it was the only portion of the Sardinian dominions left in the power of its sovereign, the French occupying the other portion of the kingdom.

Sardis, or Sardes. Anciently the capital of Lydia, in Asia Minor, stood at the foot of

Mount Tmolus, now called Bozdag, about 50 miles northeast from Smyrna; the citadel on a steep rock was almost impregnable, being fortified by three walls. It was thus enabled to hold out when the lower town was taken by the Cimmerians in the reign of Ardys. During the Ionian revolt, 601 B.C., the insurgents, aided by the Athenians, took the city. It was taken by the Turks in the 11th century, and suffered a severe blow from Tamerlane, who almost entirely destroyed it about 200 years later.

Sarmatia. The ancient name of the country in Asia and Europe, between the Caspian Sea and the Vistula, including Russia and Poland. The Sarmatæ, or Sauromatæ, troubled the early Roman empire by incursions; after subduing the Scythians, they were subjugated by the Goths in the 3d and 4th centuries. They joined the Huns and other barbarians in invading Western Europe in the 6th century.

Sarno. A city of Southern Italy, in the province of Principato Citra, on the river of the same name, 18 miles northwest of Salerno. In the plain near Sarno, Teias, king of the Goths, in a desperate battle with the Greeks, commanded by Narses, in 553, was vanquished and slain, and the reign of the Goths in Italy brought to a close.

Sarrazine. A rough portcullis.

Sarre (Fr.). When artillery was first invented, this name was given to a long gun, of smaller dimensions than the *bombard*.

Sasbach. A village of Baden, 28 miles southwest from Carlsruhe. Marshal Turenne was killed here by a random shot in 1675.

Sash. In the British army, is a military distinction worn on duty or parade by officers and non-commissioned officers. For the former, it is of crimson silk; for the latter, of crimson cotton. It is tied on the right side by the cavalry, and on the left side by the infantry. In Highland regiments, the sash is worn over the left shoulder and across the body. The sashes for the Austrian army are of crimson and gold; the Prussian army, black silk and silver; the Hanoverian wears yellow silk; the Portuguese, crimson silk, with blue tassels; the French have their sashes made of three colors,—white, pink, and light blue,—to correspond with the national flag. In the U. S. army, all general officers above the rank of brigadier-general may wear a sash of buff silk and gold-thread worn across the body; and for brigadier-generals, sashes of buff silk net, with silk bullion fringe ends, are worn around the waist.

Sassanidæ. A famous dynasty of Persia, which reigned from 226 to 651. They were the descendants of Artaxerxes or Ardshir, whose father, Babek, was the son of Sassan. Ardshir revolted against Artabanus, king of Parthia, and defeated him on the plain of Hormuz, 226, and re-established the Persian monarchy. The Roman armies could make no impression on the Persians under the

Sasaniids; but from time to time had to return defeated and humiliated from the Persian frontiers. Their last monarch, Yezdegerd, was defeated and the dynasty expelled in 652.

Satellites. Were certain armed men, of whom mention is made in the history of Philip Augustus, king of France. The satellites of Philip Augustus were men selected from the militia of the country, who fought on foot and horseback. The servants or batmen who attended the military knights when they went into action were likewise called satellites, and fought in their defense mounted or on foot.

Sattara. A town and capital of the province of the same name, in British India, in the Presidency of Bombay. In 1700 its fort offered a vigorous resistance for two months to Aurungzebe, who besieged it in person, but it was reduced by blockade; and in 1818 a few bomb-shells procured its surrender to the British.

Saturn. In heraldry, the black color in blazoning arms; sable.

Saucisson, or Sausage. Is a fascine of more than the usual length; but the principal application of the term is to the apparatus for firing a military mine. This consists of a long bag or pipe of linen, cloth, or leather, from 1 inch to 1½ inch in diameter, and charged with gunpowder. One end is laid in the mine to be exploded; the other is conducted to the galleries to a place where the engineers can fire in safety. The electric spark is now preferred to the saucisson.

Saumur. A town of France, in the department of Maine-et-Loire, 28 miles southeast of Angers. A striking event in the history of the town was its brilliant capture by Larochejaquelein and the Vendéans, June 10, 1793. In this action, the victors, with but a slight loss, captured 60 cannon, 10,000 muskets, and 11,000 republicans; it was a stronghold of the Protestants during the reign of Henry IV.

Savages, or Wild Men. In heraldry, are of frequent occurrence as supporters. They are represented naked, and also, particularly in the later heraldry, are usually wreathed about the head and middle with laurel, and often furnished with a club in the exterior hand. Savages are especially prevalent in the heraldry of Scotland. In more than one of the Douglas seals of the first half of the 15th century, the shield is borne in one hand by a single savage, who acts as sole supporter.

Savan Droog, or Savendroog. A strong hill fort of India, in the territory of Mysore, 19 miles west from Bangalore. It was stormed by the British in 1791; and after the fall of Tipoo Sahib in 1799, it was garrisoned by a native force.

Savannah. A city and port of Georgia, U. S., on the right bank of the Savannah River, 18 miles from its mouth. The city is surrounded by marshes and islands, and was defended by Fort Pulaski and Fort Jackson.

Savannah was founded in 1733, by the English general Oglethorpe. In 1776 a British fleet, attempting to take the town, was repulsed after a severe action; but it was taken in 1778, and held in 1779 against the combined French and American forces. In the war of Secession, after many unsuccessful attacks by sea, it was taken by Gen. Sherman in February, 1865.

Saverne (anc. Taberna). A town of France, in the department of Bas-Rhin, on the Zorn, 19 miles northwest of Strasburg. It is a very ancient place, and was formerly fortified. It suffered very much during the Thirty Years' War; and its fortifications were destroyed in 1696.

Savigliano. A fortified town of Northern Italy, in Piedmont, 28 miles south from Turin. The French defeated the Austrians here in 1799.

Savona. A maritime city of Northern Italy, in the province of Genoa, and 25 miles southwest from the city of that name. It is a very ancient city, and in the time of the Romans was called Sava; was destroyed by Rotharis (689), rebuilt by Ludovic the Pious (981), and was afterwards laid waste by the Saracens.

Savoy. Formerly a province in Northern Italy, east of Piedmont. It became a Roman province about 118 B.C. The Alemanni seized it in 895, and the Franks in 490. It shared the revolutions of Switzerland till about 1048. The French subdued Savoy in 1792, and made it a department of France under the name of Mont Blanc in 1800; it was restored to the king of Sardinia in 1814; but was once more annexed to France in 1860.

Sawunt Warree. A native state of India, in the Presidency of Bombay. The first treaty between Sawunt Warre and the British took place in 1780, and had for its object to suppress the piracies of the Angria family in the island of Kolabah. But the chieftains of Sawunt Warree, being themselves addicted to piracy, drew upon them the hostility of the British in 1765. A series of wars, treaties, and negotiations ensued, which ended in the subjugation of the state in 1819 by a British force. The sea-coast was then ceded to the British, and the native government restored. Rebellions were raised against the chiefs in 1828, 1832, and 1838. The most important event that has since occurred, was the dangerous rebellion which began in the autumn of 1844, and was put down after some months of hard fighting by Lieut.-Col. Outram in the beginning of the following year.

Sawyer Projectile. See PROJECTILE.

Saxons. A German people whose name is usually derived from an old German word, *saks*, "a knife," and are first mentioned by Ptolemy, who makes them inhabit a district south of the Cimbrian Peninsula. They are mentioned as brave and skillful sailors who often joined the Chauci in piratical expeditions against the coast of Gaul. In the 3d

century they appear in England under Carausius, a Belgic admiral in the Roman service, who made himself "Augustus" in Britain by their help. They had firmly rooted themselves, at the beginning of the 5th century, in the present Normandy, and they fought against Attila in the Catalaunian Plain, 451. They also obtained a footing at the mouth of the Loire; but all the Saxons who settled in France disappeared before the Franks, or were probably incorporated with their more powerful kinsmen of Southern Germany. Along with the Franks, they destroyed the kingdom of the Thuringians in 531, and obtained possession of the land between the Harz and the Unstrut; but this district was in turn forced to acknowledge the Frankish sovereignty. From 719, wars between the Saxons and the Franks became constant; but the latter, after 772, were generally successful, in spite of the vigorous resistance offered by Wittekind, and in 804, the Saxons were finally subjugated by the arms of Charlemagne.

Saxony, Kingdom of. The second in importance and population of the minor German states, and a state of the new German empire. The earliest inhabitants of Upper Saxony, since the Christian era, were the Hermunduri; in the beginning of the 6th century their settlements were taken possession of by the Sorbs, a Slavic race. The Carolingian rulers, dissatisfied with the ingress of those non-German tribes, erected "marks" to bar their progress; and Duke Otho the Illustrious of Saxony, and his celebrated son, Henry the Fowler, warred against them, the latter—subduing the Heveller, the Dalemizer, and the Miltzer—founded in their country the marks of Brandenburg Misnia (Meissen), and Lusatia (Lausitz), and planted colonies of Germans among the Sorbs. In 1090 the mark was bestowed on the house of Wettin, and was confirmed as a hereditary possession to that family in 1127. Frederick the Warlike (1181–1228) succeeded in uniting the severed portions of Saxony, to which were added various districts in Franconia, and in 1228 the electorate of Saxony. The Saxon elector was now one of the most powerful princes of Germany, but unfortunately the fatal practice of subdividing the father's territories among his sons still continued; and during the reign of the elector, Frederick the Mild (1428–1464), a civil war broke out and was carried on for years. By a separate treaty of peace (1465), John George I. obtained Upper and Lower Lusatia, acquisitions confirmed by the treaty of Westphalia (1648). The reign of Frederick Augustus I. (1694–1733) well-nigh ruined the hitherto prosperous electorate. Frederick Augustus had been chosen king of Poland; and his attempt, in company with the czar and the king of Denmark, to dismember Sweden, brought down upon him and his two states the vengeance of the northern "fire-king." Poland was utterly devastated, and Saxony

exhausted in money and troops; the king was forced to sell many important portions of territory; Frederick Augustus II. (1733–1763), also king of Poland, took part in the war of the Austrian Succession against Maria Theresa, but finding the treaty of Berlin (1742) not so satisfactory for himself as he expected, he joined the empress in 1745. The country was atrociously ravaged during the Seven Years' War, and a long time elapsed before it recovered its previous peaceful and prosperous state. In the conflict of 1866 the king of Saxony took the side of Austria, and his army fought in the battle of Königgratz, July 3. The Prussians entered Saxony June 18. Peace between Prussia and Saxony was signed October 21 (subjecting the Saxon army to Prussia), and the king returned to Dresden November 8. In 1870–71 the Saxon soldiers fought under the leadership of the crown-prince, afterward King Albert, as true allies by the side of the Prussians, and the interior development of the country has not only kept pace with, but in some respects even advanced beyond, that of the rest of Northern Germany.

Scabbard. Is the sheath for a sword or bayonet, at once to render the weapon harmless and to protect it from damp. It was usually made of black leather, tipped, mouthed, and ringed with metal, but is now generally made of bronzed steel. The cavalry wear scabbards of polished steel. These better sustain the friction against the horses' accoutrements, but are objectionable from their noisiness, and the consequent impossibility of surprising an enemy. The sword-scabbard is suspended to the belt by two rings; the bayonet-scabbard hooks into a frog in connection with the waist-belt.

Scalade (from the Fr. *escalade*). A furious attack upon a wall or rampart, contrary to form, and with no regularity, frequently carried on with ladders, to insult the wall by open force.

Scale. To climb by a ladder, or as if by a ladder; to clamber up; as, to scale the ramparts.

Scale-armor. Consisted of small plates of steel riveted together in a manner resembling the scales of a fish. From the small size of the plates, it possessed considerable pliability, and was therefore a favorite protection for the neck, in the form of a curtain hanging from the helmet. Scale-armor is now obsolete, except, perhaps, among some Eastern potentates.

Scaling. Scaling a piece of artillery, is the flashing off of a small quantity of powder to clean out the bore; about one-twelfth of the shot's weight. The practice is discontinued.

Scaling-ladders (Fr. *echelles de siege*). Are ladders used in scaling when a place is to be taken by surprise. They are made several ways; sometimes of flat staves, so as to move about their pins, and shut like a parallel ruler, for conveniently carrying them.

Scamper. To run away precipitately; said of troops.

Scandinavia. The ancient name of Sweden, Norway, and a great part of Denmark, whence proceeded the Northmen, or Normans, who conquered Normandy (about 900), and eventually England (1066). See **NORMANS**.

Scarf. In heraldry, a small ecclesiastical banner suspended from the top of a crozier.

Scarp, To. To cut down a slope so as to render it inaccessible. See **COUNTERSCARP**, and **ESCARP**.

Scarpe. In heraldry, a diminutive of the bend sinister, being half the breadth of that ordinary.

Sceptre. Originally a staff or walking-stick, hence in course of time, also a weapon of assault and of defense. At a very early period the privilege of carrying it came to be connected with the idea of authority and station. The sceptre of the kings of Rome, which was afterwards borne by the consuls, was of ivory, and surmounted by an eagle. Since that time there has been considerable variety in its form. The English sceptre now in use dates from Charles II.'s time, and is cruciform.

Schaife. In the Middle Ages, a quiver or bundle of arrows was so called.

Schellenberg. A village in the south-east of Upper Bavaria, 6 miles southwest from the Austrian town of Salzburg, near which occurred the first battle of the War of the Spanish Succession, in which the English took part. Maximilian Emmanuel, elector of Bavaria, had fortified the hill of Schellenberg to resist the progress of Marlborough; but on July 4, 1704, the work was attacked by the English, led on by Prince Ludwig, of Baden, and carried by storm after a bloody fight.

Schenkle Projectile. See **PROJECTILE**.

Schierling. A town of Germany, in Bavaria, 12 miles south from Ratisbon. The Austrians were defeated by the French in its vicinity in 1809.

Schleswig, or Sleswick. Formerly a duchy of Denmark. Its history is identical with that of Holstein (which see).

Schliengen. A town of Baden, 22 miles southwest from Mulheim. The Archduke Charles of Austria defeated the French near this place in 1796.

Schmalkald, League of. The name given to the defensive alliance concluded provisionally for nine years at Schmalkalden, February 27, 1531, between nine Protestant princes and eleven imperial cities, with whom other five princes and ten imperial cities subsequently made common cause; and the elector of Saxony and the landgrave of Hesse were appointed chiefs of the league, and empowered to manage its affairs. The object of this formidable alliance, which included the whole of Northern Germany, Denmark, Saxony, and Württemberg, and portions of Bavaria and Switzerland, was for the common defense of the religious and

political freedom of the Protestants against the emperor Charles V. and the Catholic states. The league was not rendered superfluous by the religious peace of Nürnberg in 1532, and on the rumor that the emperor was meditating new hostile measures against the Protestants, another meeting of the confederates was held December 24, 1535, which resolved to raise a permanent army of 10,000 foot and 2000 cavalry, and to prolong the league for ten years. The confederation was further consolidated by articles of guarantee, which were drawn up by Luther at Wittenberg in 1536, and being subscribed by the theologians present at the meeting of the league at Schmalkalden in February, 1537, were called the *Articles of Schmalkald*. Against the league the emperor, engaged as he was at the time in contests with the Turks and French, found himself unable to contend, though supported by the Holy League, a Catholic confederation formed in 1538, in opposition to the Protestant one. But impolitic management, mutual jealousies, and conflicting petty interests dissipated their energies, and prevented united action. The "War of Schmalkald" commenced by the advance of the army of the league, under Sebastian Scharf, in Suabia, to bar the approach of the imperial army from Italy. Scharf forced his way to the banks of the Danube, but the miserable jealousy of the Saxon princes paralyzed his action. The emperor, by a proclamation bearing date July 20, 1546, put the two chiefs of the league under the ban of the empire; Maurice, duke of Saxony, took possession of the electorate, by virtue of an imperial decree; and the Protestant army was forced to retreat. The elector of Saxony reconquered his electorate in the autumn of 1546, but meantime the imperial army subdued the northern members of the League of Schmalkald and advanced into Franconia to meet the combined armies of Saxony and Hesse. The latter were totally routed at Mühlberg, April 24, 1547, and both chiefs fell into the emperor's hands. This defeat, which has been ascribed to treason, and was perhaps as much owing to this cause as to weakness, finished the war. The object of the league, the guarantee of the liberty of religion to the Protestants, was subsequently effected by Maurice, now elector of Saxony, who, by a brilliant feat of diplomacy and generalship, compelled the emperor to grant the treaty of Passau, July 31, 1552, by which this freedom was secured.

Schoolmaster, Army. In the English army, the schoolmaster is a non-commissioned officer of the first class, ranking next to a sergeant-major. His pay varies with length of service. He has an advantage over other non-commissioned officers in quarters and certain allowances. To become an army schoolmaster, it is necessary either to be a certificated schoolmaster, or to have served the apprenticeship as a pupil-teacher, and to pass through a course of training for one

year at the Royal Military Asylum, Chelsea. After the completion of the training, the candidate is required to enlist as a common soldier for ten years' general service, whereupon he is immediately promoted to the rank of schoolmaster. A few of the most deserving schoolmasters are promoted to be superintending schoolmasters, when they rank as ensigns. The duties of the schoolmaster are to teach the soldiers and their children the rudiments of general knowledge, to examine the girl's school, and to deliver lectures to the soldiers. There were in 1865 214 army schoolmasters in the British service.

Schoolmistress, Army. In the British service, is a person attached to each regiment or corps for the purpose of instructing the daughters of soldiers and their sons, under eight years old, in the rudiments of English and in plain needle-work. She must be a certified schoolmistress, or a pupil-teacher who has served her apprenticeship. After admission to the service, she is specially trained for six months at one of four training institutions. This training is at the expense of the government. Proper provision is made for the quarters and supplies of the schoolmistress, whose somewhat anomalous position among rough men calls for the most circumspect behavior on her part.

Schools of Artillery. See **ARTILLERY, SCHOOLS OF.**

Schultz's Powder. A powder for firearms invented by Capt. Schultz of the Prussian army, sometimes called *white gunpowder*, though this term is also applied to other powder. It is made by treating grains of wood with a mixture of nitric and sulphuric acids, by means of which a low form of nitro-cellulose is produced. The explosive power is heightened by steeping the prepared grains in a solution of nitre. *Dittman's sporting powder*, manufactured in America, is believed to be a similar powder.

Schumla, Shoomla, or Shumla. A large fortified town of Turkey in Europe, in the province of Bulgaria, about 58 miles southwest from Silistria. The Russians have made several unsuccessful attempts to take it in their different wars with Turkey.

Schuwalow Gun (Fr.). A gun named after the inventor, a Russian general. It differed from a common gun in having an oval bore; the greater diameter lay in a horizontal direction; it had also a long cylindrical chamber.

Schweidnitz. A town of Prussian Silesia, on the left bank of the Weistritz, 42 miles southeast of Liegnitz. It is in part fortified, and was besieged and taken four times within fifty years, the last time by the French in 1807, when the defenses were in great part destroyed.

Schwytz. One of the cantons of Switzerland. It was one of the three original cantons that formed the Confederation in 1308 against the Austrian power; and from its name the modern appellation of the entire country has been derived.

Sciathus (now Skiatho). A small island in the Aegean Sea, east of the Magnesian coast of Thessaly. It is frequently mentioned in the history of the invasion of Greece by Xerxes. It subsequently became one of the subject allies of Athens. Its chief town was destroyed by the last Philip of Macedonia.

Science, Military. See **LOGISTICS, STRATEGEM, STRATEGY, TACTICS, and WAR.**

Scillus. A town of Elis, on the river Selinus, south of Olympia. It was destroyed by the Eleans in the war which they carried on against the Pisæans, whose cause had been espoused by the inhabitants of Scillus. The Lacedæmonians subsequently took possession of the territory of Scillus; they gave it to Xenophon after his banishment from Athens.

Scimeter. See **CIMETER.**

Scio, Chio, or Khio (anc. Chios). An island belonging to Asiatic Turkey, lying in the Grecian Archipelago, off the coast of Asia Minor. Chios became a member of the Ionian confederation of twelve states on the Asiatic islands and coast. Its insular position protected it against the Lydian, and for a time against the Persian power. But in the Ionian revolt the Chians lent their assistance to their fellow-countrymen by furnishing ships to the fleet, which was totally defeated by the Persians off Miletus, 494 B.C. The conquerors in consequence landed on the island, and ravaged it with fire and sword. The battle of Mycale, in 479, liberated Chios from the Persian yoke, but only to become a dependency of Athens. To this power it remained faithful till after the outbreak of the Peloponnesian war; but as that disastrous contest proceeded, and the fortune of war began to prove adverse to Athens, the Chians attempted to assert their liberty. They suffered several defeats from the Athenians, who laid waste the island, but could not conquer the capital. At a later period Chios was again subject to Athens, and again revolted, and seems to have maintained its independence for some time. It gave assistance to the Romans in their war with Antiochus, 190 B.C.; and afterwards, when allied with Mithridates, that monarch, suspecting the people of a bearing towards the Romans, sent a lieutenant, who carried the inhabitants away from the island, 86 B.C. They were restored by the Romans; and, in consideration of this calamity, the island was made a free state and an ally of Rome. Early in the 14th century, the Turks conquered the capital, and perpetrated a general massacre of its inhabitants; but from 1346 to 1566 Scio was held by the Genoese. In the latter year it was conquered by Solymán the Magnificent; and since that time, with the exception of a short period when the Venetians possessed it, the island has belonged to the Ottoman empire. In 1822, during the Greek insurrection, a number of Samians landed in Scio, and persuaded or forced its peaceful inhabitants to rise against

the Turks. They did not succeed in mastering the castle, and soon an army was landed from Asia, who renewed the ancient calamities of the island. The plunder and massacre that ensued was so unsparing that in a short time only 2000 Christians were left out of a population of 110,000.

Scione. The chief town in the Macedonian peninsula of Pallene, on the western coast. It revolted from the Athenians in the Peloponnesian war, but was retaken by Cleon, whereupon all the men were put to death, the women and children sold as slaves, and the town given to the Plataeans.

Scirtis. A wild and mountainous district in the north of Laconia, on the borders of Arcadia, with a town called Scirus, which originally belonged to Arcadia. Its inhabitants, the Sciritæ, formed a special division of the Lacedæmonian army. This body, which, in the time of the Peloponnesian war, was 600 in number, was stationed in battle at the extreme left of the line, formed on march the vanguard, and was usually employed on the most dangerous kinds of service.

Sconce. In fortification, is a term applied to any small redoubt or fort, detached from the main works for some local object, as the defense of a pass or fort, etc. The word is not now often used.

Scopetin (Fr.). A rifleman was formerly so called who was armed with the escopette.

Scordisci. A people in Pannonia Superior, who are sometimes classed among the Illyrians, but were the remains of an ancient and powerful Celtic tribe. They dwelt between the Savus and Dravus.

Scorpion (Fr.). A small kind of catapult, or large cross-bow, which threw heavy arrows by means of a steel bow, which was bent by a double-handed roller turned by one man.

Scorpion (Fr.). An ancient gun, whose dolphins represented the scorpion. Also the name of an implement used by the ancients for laying hold of the enemy's battering ram.

Scotch Brigade. A brigade of Scotchmen, gentlemen, and others, who served under the elector of Bavaria in the reign of James I., and subsequently under Gustavus Adolphus in the Thirty Years' War.

Scotland. The northern division of the island of Great Britain. An account has been given under the article Picts (which see) of the early inhabitants of the country which has long been known by the name of Scotland. The original Scotia, or Scotland, was Ireland, and the Scoti, or Scots, at their first appearance in history were the people of Ireland. The original seat of the Scots in Northern Britain was in Argyll, which they acquired by colonization and conquest before the end of the 5th century, and from whence they spread themselves along the western coast from the Firth of Clyde to the modern Ross. The first prince of the British Scots mentioned in authentic annals was

Fergus, son of Eric, who crossed over to Britain about the year 508. His great-grandson, Conal, was king of the British Scots when Columba began the conversion of the Northern Picts. His nephew, Aidan, who succeeded him was a powerful prince, and more than once successfully invaded the English border, but toward the end of his reign he received a severe defeat from the Northumbrian sovereign Ethelfrid at the battle of Degsestan. The history of Aidan's successors is obscure. Their kingdom was overshadowed by the more powerful monarchy of the Picts, with which, as well as with its neighbors in the south,—the Britons of Cumbria,—it was engaged in almost unceasing conflict. The Scots were for some time under some sort of subjection to the English of Northumbria, but recovered their independence on the defeat and death of King Egfrid in battle with the Picts at Nechtansmere in 685. In the middle of the 9th century, the Scots acquired a predominance in Northern Britain. Kenneth, son of Alpin, succeeded his father as king of the Scots. The Pictish kingdom was weakened by civil dissensions and a disputed claim to the crown. The Picts and Scots, each speaking a dialect of the Celtic tongue, gradually coalesced into one people. The reign of Constantine, son of Aodh, who succeeded in 904, was a remarkable one. Even before the establishment of the kingdom of the Picts and Scots in the person of Kenneth, Northern Britain had experienced the attacks of a new enemy, the Scandinavian invaders, generally spoken of under the name of Danes. Constantine resisted them bravely, but towards the end of his reign, he entered into an alliance with them in opposition to the English. A powerful army, composed of Scots, Picts, Britons, and Danes, disembarked on the Humber, and was encountered at Brunanburgh by Athelstan, king of England. A battle was fought there, the first of a series of unfortunate combats by Scottish princes on English ground. The confederate army was defeated, but Constantine escaped, and died 958. During the reign of Malcolm I., a portion of the Cumbrian kingdom was bestowed by Edmund, king of England, on the Scottish sovereign. The northern kingdom was still further increased in the reign of Kenneth, son of Malcolm, by the acquisition of Lothian and of Northern Cumbria, or Strathclyde. Alexander III. employed the period of his reign well; by a treaty with the king of Norway, he added to his kingdom Man and the other islands of the Western Sea. The reigns of David II. and his successors, Robert II. and Robert III., were the most wretched period of Scottish history. In the year 1411, half of the kingdom would have become barbarous if the invasion of the Lord of the Isles had not been repulsed at Harlaw (which see). The vigorous rule of James I. had restored a tranquillity to which his kingdom had long been unaccustomed; but strife and discord were again

brought back on his assassination. The reigns of Charles II. and James VII. were more corrupt and oppressive than any which Scotland had experienced since the regencies in the minority of James VI.; the natural result was the revolution, which seated William and Mary on the throne. Under James VI., who succeeded to the throne of England, the kingdoms became united, from which period (1603) the annals of the two kingdoms became almost identical, though they both retained their independence, and continued to be ruled by separate titles till the Act of Union in 1707.

Scots Fusileer Guards. See GUARDS.

Scots Grays. The 2d regiment of dragoons in the British service is so named. They are considered a superior body of cavalry, and bear as their motto "Second to None."

Scott Projectile. See PROJECTILE.

Scotussa. A very ancient town of Thessaly, in the district of Pelasgiotis, near the source of the Cynoscephalæ, where Flaminius gained his celebrated victory over Philip, 197 B.C.

Scour, To. This term is frequently used to express the act of discharging ordnance or musketry, rapidly and heavily, for the purpose of dislodging an enemy. Hence, to scour the rampart, or the covert way. It likewise signifies to clear, to drive away; as, to scour the seas; also to run about in a loose desultory manner; as, to scour the country. *To scour a line*, is to flank it, so as to see directly along it, that a musket-ball entering at one end may fly to the other, leaving no place of security.

Scout. A person sent out in the front or on the flank of an army to observe the force and movements of the enemy. He should be a keen observer, and withal fleet of foot, or well mounted.

Scout-master-General. A person, formerly so called, under whose direction all the scouts and army messengers were placed.

Screw. See ELEVATING SCREW.

Screw-jack. See IMPLEMENTS.

Scribe (Heb. *Sofer*). Among the Jews, originally a kind of military officer, whose business appears to have been the recruiting and organizing of troops, the levying of war-taxes, and the like. At a later period, especially at the time of Christ, it had come to designate a learned man, a doctor of the law.

Scutari. A town of Asiatic Turkey, opposite Constantinople. It was anciently called *Chrysopolis*, "golden city," in consequence, it is said, of the Persians having established a treasury here when they attempted the conquest of Greece. Near here Constantine finally defeated Licinius, 323. Scutari Hospital was occupied by the sick and wounded of the Anglo-French army in 1854-55, whose sufferings were much alleviated by the kind exertions of Miss Florence Nightingale and a band of nurses under her.

Scutum. A Roman buckler made of wood, the parts being joined together with little plates of iron, and the whole covered with a bull's hide. In the middle was an *umbo*, or boss of iron, which jutted out, and was useful to glance off stones or darts. The *scuta*, in general, were 4 feet long, and different in size from the *clypei*, which were less, and quite round.

Scythed. Armed or furnished with scythes, as some of the ancient chariots were.

Scythia. A name employed in ancient times to denote a vast, indefinite, and almost unknown territory north and east of the Black Sea, the Caspian, and the Sea of Aral. This country was inhabited by a race of people who were called *Scythæ*, but who called themselves *Scoloti*. Only two important events in Scythian history are mentioned by Herodotus; the one is the invasion of Media by the Scythians, and the other that of Scythia by Darius. In 624 B.C. the Scythians entered Media, defeated Cyaxares, the reigning monarch, and occupied the land for twenty-eight years before they were expelled. It was at least ostensibly in revenge for this incursion that Darius Hystaspis determined to invade Scythia about 518 B.C. He formed a bridge across the Danube, and crossing that river obtained some advantages over the Scythians. But he was unable to effect any real conquest over these nomad tribes, and narrowly escaped having his retreat cut off by the destruction of the bridge.

Sea-coast Carriage. See ORDNANCE, CARRIAGES FOR.

Sea-coast Artillery. Is a species of artillery which is used for the defense of the sea-coast. In the United States it consists of 15-inch and 20-inch smooth-bores, 12-inch rifles, and 10-inch and 13-inch mortars. (See ORDNANCE.) The 24-pounder flank-defense howitzer, although no longer belonging to the system, is still employed in several of the forts on the sea-board. Sea-coast pieces are mounted on barbette, casemate, and flank-casemate carriages; and the carriage upon which the mortar is mounted is called its *bed*. These carriages do not subserve the purpose of transportation. The heaviest rifle-cannon should be placed on the salients and flanks of a fortification, having an enfilading fire on a channel. Heavy smooth-bore pieces should occupy the curtains and faces which bear directly on the channel. The 24-pounder flank-defense howitzer is employed in the defense of ditches. Single- or double-shotted canister should be fired from it. The Gatling gun has been recommended as a desirable auxiliary in special cases. A 12-pounder field-piece may be usefully employed to prevent a landing, or to fire in close engagements at the rigging and boats of vessels. There are three kinds of fire generally employed,—*direct*, *ricochet*, and *plunging*. The first should be used when the surface of the water is rough, and the accuracy of the rebound cannot be depended on. In aiming at a

vessel with *direct* fire, the piece should be pointed at the water-line. The effective range of *direct* fire is about one mile and a quarter. The intended effect of sea-coast mortars is to strike the decks of vessels, penetrating to the bottom and causing them to sink.

Sea-coast Howitzer. See SEA-COAST ARTILLERY.

Sea-horse. In heraldry, a fabulous animal, consisting of the upper part of a horse with webbed feet, united to the tail of a fish. A scalloped fin is carried down the back. The arms of the town of Cambridge are supported by two sea-horses, proper finned and maned or.

Sea-lion. In heraldry, a monster consisting of the upper part of a lion combined with the tail of a fish.

Sealkote. A town in the Punjab, near the left bank of the Chenab, 65 miles north-northeast from Lahore. All the European troops had been removed in July, 1857, to repress disturbances that had broken out elsewhere, and on the 9th of that month the native troops fired on their officers. A considerable number of Europeans were killed, and the survivors suffered great privations until the Sepoys, having plundered the station, started off in the direction of Delhi.

Search a Country, To. Is to examine minutely all the inlets and outlets, woods, rivers, etc., of a country through which an army is to advance.

Searcher. See INSPECTION OF CANNON.

Seasoned Troops. Are troops that have been accustomed to climate, and are not so liable to become the victims of any endemic disorder as raw men unavoidably are.

Seat of War. The country in which a war is being carried on.

Sebastopol, or Sevastopol. A Russian seaport, fortress, and arsenal in the Crimea, in the government of Taurida. It is situated near the southwest extremity of the Crimea, on the southern side of the magnificent harbor or roadstead of Sebastopol, one of the finest natural harbors in the world. The siege of Sebastopol by the allied English and French armies will rank among the most famous sieges in history; it lasted for eleven months, from October, 1854, to September, 1855. Immediately after the battle of the Alma, September 20, 1854, the allied army marched to Sebastopol, and took up its position on the plateau between it and Balaklava, and the grand attack and bombardment commenced October 17, 1854, without success. After many sanguinary encounters by day and night, and repeated bombardments, a grand assault was made on September 8, 1855, upon the Malakoff tower and the redans, the most important fortifications to the south of the town. The French succeeded in capturing and retaining the Malakoff. The attacks of the English on the great redan and of the French upon the little redan were successful, but the assail-

ants were compelled to retire after a desperate struggle with great loss of life. The French lost 1646 killed, of whom 5 were generals, 24 superior and 116 inferior officers, 4500 wounded, and 1400 missing. The English lost 385 killed, 1886 wounded, and 176 missing. In the night the Russians abandoned the southern and principal part of the town and fortifications, after destroying as much as possible, and crossed to the northern forts. They also sank or burnt the remainder of their fleet. The allies found a very great amount of stores when they entered the place, September 9. The works were utterly destroyed in April, 1856, and the town was restored to the Russians in July.

Second. The next in order to the first; the next in place or station; as, a second lieutenant of the artillery service.

Second Covert Way. In fortification, is that beyond the second ditch.

Second Ditch. In fortification, is that made on the outside of the glacis, when the ground is low, and there is plenty of water.

Second Flank. See FLANK, OBLIQUE.

Second, To. To aid or assist; to support.

Secondary Bases. The bases established at the beginning of a campaign and from which the first advances are made, are known as *primary bases*. An army carries with it ammunition only sufficient for one battle, and but a few days' supply of food. Other supplies of ammunition and provisions must be brought from the base; and as an army advances, the difficulty of keeping it supplied increases. Unless some additional provision be made for its supply, the army cannot advance and is then said to be "tied to its base." As the necessary supplies cannot be obtained in the theatre of operations in sufficient quantities for the daily needs of an army, depots and magazines must be organized near the army from which these supplies can be procured, and these together form what is known as a *secondary base*.

Seconding. In Great Britain, is a temporary retirement to which officers of Royal Artillery and Royal Engineers are subjected when they accept civil employment under the crown. After six months of such employment the officer is seconded, by which he loses military pay, but retains his rank, seniority, and promotion in his corps. After being seconded for ten years, he must elect to return to military duty or to retire altogether.

Secrecy. In military economy this quality is peculiarly requisite. It signifies fidelity to a secret; taciturnity inviolate; close silence. Officers, in particular, should be well aware of the importance of it, as the divulging of what has been confidentially intrusted to them, especially on expeditions, might render the whole project abortive. The slightest deviation from it is very justly considered a breach of honor, as scandalous conduct unbecoming an officer and a gentleman. In official matters the person so of-

fending is liable to the severest punishment and penalty.

Secretary of War. Is an officer of the executive department and member of the Cabinet, appointed by the President and confirmed by the Senate, and has charge of all duties connected with the army of the United States, fortifications, etc., issues of commissions, movement of troops, payment, commissary, etc., and engineering. The following is extracted from the law of the United States:

"There shall be at the seat of government an executive department to be known as the Department of War, and a Secretary of War, who shall be the head thereof.

"The Secretary of War shall perform such duties as shall from time to time be enjoined on or intrusted to him by the President relative to military commissions, the military forces, the warlike stores of the United States, or to other matters respecting military affairs, and he shall conduct the business of the department in such manner as the President shall direct.

"The Secretary of War shall have the custody and charge of all the books, records, papers, furniture, fixtures, and other property appertaining to the department.

"The Secretary of War shall from time to time cause to be collected and transmitted to him, at the seat of government, all such flags, standards, and colors as are taken by the army from enemies of the United States.

"The Secretary of War shall from time to time define and prescribe the kinds as well as the amount of supplies to be purchased by the subsistence and quartermaster departments of the army, and the duties and powers thereof respecting such purchases, and shall prescribe general regulations for the transportation of the articles or supply from the place of purchase to the several armies, garrisons, posts, and recruiting-places, for the safe-keeping of such articles, and for the distribution of an adequate and timely supply of the same to the regimental quartermasters, and to such other officers as may by virtue of such regulations be intrusted with the same, and shall fix and make reasonable allowances for the store rent and storage necessary for the safe-keeping of all military stores and supplies.

"The transportation of troops, munitions of war, equipments, military property, and stores, throughout the United States, shall be under the immediate control and supervision of the Secretary of War and such agents as he may appoint."

The British secretary of war was formerly a high officer of the British ministry, having control of the financial arrangements of the army, and being the responsible medium for parliamentary supervision in military affairs. The formation of a war-office proper took place about 1620, the secretary of state having previously performed its duties. It was, however, limited to financial authority, neither the commander-in-chief nor the

muster-general of the ordnance being subject to it. During the Russian war the evils of this divided authority led to the creation of a secretary of state for war, to control all the military departments. The secretaryship-at-war was merged in the superior office in 1855, and abolished by act of Parliament in 1868. See **MINISTER**.

Section. A certain proportion of a battalion or company, when it is told off for military movements and evolutions.

Sector of Explosion. At the moment that a gun is fired, there is a sort of spherical sector of fire formed in front of the piece, whose extremity presses against the bottom of the bore, while the external portion of it terminates in the air, which this sector compresses and drives in every direction; the air thus forming a support, the sector reacts with its full force upon the bottom of the bore and causes the recoil of the piece.

Secure, To. In a military sense, is to preserve, to keep, to make certain; as, to secure a plan; to secure a conquest. In the management of a musket, it signifies to bring it to a certain position, by which the lock is secured against rain. Hence, *secure arms* is a word of command which is given to troops who are under arms in wet weather.

Secuteur (Fr.). A gladiator who was armed with a helmet, shield, and sword, or leaden club, and who fought with the *Rétailleur*.

Sedan. A town of France, department of Ardennes, on the Meuse; it is fortified, and contains an arsenal and several magazines. On July 6, 1841, a victory was gained at La Marfée, near Sedan, by the Count of Soissons and the troops of Bouillon and other French princes over the royal army supporting Richelieu. On August 29-31, 1870, a series of desperate conflicts took place here between the French Army of the North under MacMahon (about 150,000 men), and the greater part of the three German armies, under the king and crown-prince of Prussia and the crown-prince of Saxony (about 250,000 men), and was brought to a close on September 1, 1870. The battle began with attacks on the French right and left, about 5 A.M., and was very severe at 2 P.M. At 4 P.M. the Germans remained masters of the field, and the crown-prince of Prussia announced a complete victory, the chief part of the French army retreating into Sedan. The emperor Napoleon was present during the battle, and, it is said, stood at Igé, near Sedan, exposed for four hours to the German grenades. The impossibility of further resistance was then evident. The Germans had contracted their circle close around Sedan; their formidable artillery held all the heights, from which they could at pleasure wholly destroy the town and the army, and only 2000 men were in a condition to respond to their commander's call, and to make a supreme effort to break through the enemy with the emperor, and escape to Montmédy. At first, Gen. de Wimpffen (called to the command when

MacMahon was wounded), indignantly rejected the terms offered by the victor, and the emperor had a fruitless interview with Count Bismarck to endeavor to mitigate them. On September 2, 1870, a capitulation of Sedan and the whole army therein was signed by Gens. von Moltke and de Wimpffen, at the chateau of Bellevue, near Frenois. The conflict was principally carried on by the artillery, in which the Germans had the advantage, not only in number (600 to 500), but also in weight, range, and precision. The carnage was awful, and the field the next day was a mass of shattered bones, torn flesh, and colored rage. About 25,000 French prisoners were taken in the battle, and 83,000 surrendered the next day, together with 70 mitrailleuses, 400 field-pieces, and 150 fortress guns. About 14,000 French wounded were found lying in the neighborhood, and about 3000 escaped into Belgium and laid down their arms. The great Army of the North ceased to exist. On September 1, the village of Bazeilles was stormed by the Bavarians and burnt, it was said, because the inhabitants fired on the ambulances; many women and children perished. The French denied the provocation. The place had been previously twice bombarded and stormed by the maddened combatants.

Sedgemoor. A wild tract of England, in Somersetshire, between Bridgewater and King's Weston, where the Duke of Monmouth (the natural son of Charles II. by Lucy Walters), who had risen in rebellion on the accession of James II., was completely defeated by the royal army, July 6, 1685. The duke was made a prisoner in the disguise of a peasant, at the bottom of a ditch, overcome with hunger, fatigue, and anxiety.

Sedition. In a military sense, is to disobey orders, to cabal or form factions against the officer or officers in command; to loosen confidence; to resist or oppose orders, or to stir up mutiny. It is an offense in military law of the most fatal character, and always punished in a most exemplary manner.

Sedusii. A German people, forming part of the army of Ariovistus when he invaded Gaul, 58 B.C.; they are not mentioned at a later period, and consequently their site cannot be determined.

See, To. In a military sense, is to have practical knowledge of a thing; as, to see service. *To have seen a shot fired* is a figurative expression in the British service, signifying to have been in action; also, to have been under fire.

Seetabuldee. A strong military position in Hindostan, near Nagpore, where a severe contest took place during the Mahratta war between the Boosla rajah and a small number of the British troops, in which the former were defeated.

Segbans. Are horsemen among the Turks who have care of the baggage belonging to cavalry regiments.

Segesta. A town situated in the north-west of Sicily, near the coast, between Panormus and Drepanum. Its inhabitants were constantly engaged in hostilities with Selinus; and it was at their solicitation that the Athenians were led to embark in their unfortunate expedition against Sicily. The town was taken by Agathocles, who destroyed or sold as slaves all its inhabitants, peopled the city with a body of deserters, and changed its name into that of Dicæopolis; but after the death of this tyrant, the remainder of the ancient inhabitants returned to the city, and it resumed its former name.

Seistan (formerly called *Segestan*). A khanat or principality of Asia, forming the southwest portion of Afghanistan. It was devastated by Tamerlane in 1383.

Sejant, or Assis. In heraldry, is the term of blazon applied to a beast in his usual sitting posture. A lion borne in full face, with his forepaws extended sideways, is blazoned *sejant affronté*, as in the crest of Scotland.

Sejour (*Fr.*). In a military sense, signifies a halting day.

Selection. The act of choosing in preference to others; hence, selection of officers to act upon the staff, etc.; to select quarters, etc. See **QUARTERS, CHOICE OF.**

Seleucia ad Tigrin (also called *Seleucia Babylonia, Seleucia Assyria, and Seleucia Parthorum*). A great city on the confines of Assyria and Babylonia, and for a long time the capital of Western Asia. It commanded the navigation of the Tigris and Euphrates. It was burned by Trajan in his Parthian expedition, and again by L. Verus, the colleague of M. Aurelius Antoninus. It was again taken by Severus.

Seleucia Pieria (ruins, called *Seleukeh, or Kepse, near Suadeiah*). A great city and fortress in Syria, founded by Seleucus in April, 300 B.C. In the war with Egypt, which ensued upon the murder of Antiochus II., Seleucia surrendered to Ptolemy III. Euergetes (246 B.C.). It was afterwards recovered by Antiochus the Great (219). In the war between Antiochus VIII. and IX., the people of Seleucia made themselves independent (109 or 108); afterwards they successfully resisted the attacks of Tigranes for fourteen years (84-70). The city had fallen entirely into decay by the 6th century of our era.

Selictar. A Turkish sabre.

Seljuku, or Seljuk-Turks. A small Turkish tribe which, at an early date, took possession of Bokhara and the surrounding country. They attracted the notice of Sultan Mahmoud, the founder of the dynasty of the Ghuznevites, who had advanced into Bokhara with his army, and was so impressed with the fine military qualities of their chief, that he induced them to cross the Oxus and to occupy the country of Khorasan. He had soon reason to repent of this fatal error. Like all those wandering hordes,

the Turkomans were shepherds or robbers. They either molested the neighboring states by petty inroads, or, with the whole united force of the nation, they practiced robbery on a great scale, seizing on kingdoms and despoiling nations. The first migrations of these Eastern Turkomans is generally fixed in the 10th century. They became formidable to Mahmoud, and more especially to his successor, Massoud, who, from inability to resist their progress, was forced to grant them lands. He was afterwards defeated by them in a great battle; and the victorious Turks, under their leader, Togrul Beg, whom they now elected king, invaded Khorassan, and finally expelled the Ghuznevites, the descendants of Mahmoud, from the eastern provinces of Persia. They fled eastwards towards the Indus, and established the Ghuznian empire in the northwestern provinces of India. This empire was maintained with various success till about the year 1184, under the Ghuznian emperors, when they were superseded by that of the Afghan or Patan emperors, who completed the conquest of the greatest part of Hindostan Proper about 1210. Togrul Beg hastened to improve his victory over the Persian monarch. Turning his arms to the west, he invaded Irak, in the centre of Persia, and advancing westward of the Caspian Sea into Azerbaijan, the ancient Media, he made his first approaches to the confines of the Roman empire. He afterwards proceeded to Bagdad, and by his conquest of that place, gained possession of the caliph. His successors Alp Arslan and Malek Shah extended the empire transmitted to them by Togrul Beg. They subdued the fairest portions of Asia. Jerusalem and the Holy Land were taken and pillaged by the Seljuks, and it was the vexation and rapine to which the Christian pilgrims were exposed in their journey to Jerusalem, that gave rise to those wild and warlike expeditions for the recovery of the Holy Land, known under the name of the Crusades. The empire under Malek Shah extended from the Mediterranean to the Chinese frontier, and from the Caspian to the Arabian Sea. Upon the death of Malek Shah the empire was divided up into petty sultanates, which finally caused the overthrow of the Seljuk empire. The Turkish dynasty of the Seljuks continued for 215 years, and with the overthrow of its dynasty in 1299, and on its ruins, arose the Turkish empire.

Selkirkshire (formerly called the *Elrick Forest*). A small inland county of Scotland, in the Lowlands. Among the interesting historical scenes this county contains is the field of Philiphaugh, where the great Marquis of Montrose was defeated by the Covenanters under Gen. Leslie.

Sell Out. In the British service, was a term generally used when an officer was permitted to retire from the service, selling or disposing of his commission or commissions. It was the correlative word to *buy in*. Offi-

cers who purchased commissions were usually allowed to sell out.

Sellasia. A town in Laconia, north of Sparta, situated near the River Enus, and commanded one of the principal passes leading to Sparta. Here the celebrated battle was fought between Cleomenes III. and Antigonos Doson, 221 B.C., in which the former was defeated.

Selling Ammunition. See APPENDIX, ARTICLES OF WAR, 16.

Selymbria, or Selybria (now *Selivria*). An important town in Thrace, on the Propontis. It was a colony of the Megarians. It was conquered by Philip, father of Alexander.

Semaphore. A machine for facilitating the internal communications of the country by means of telegraphic signals, especially between the government and the military or naval functionaries of the outposts; but its use has been entirely superseded by the introduction of the railways and the electric telegraph.

Semé. In heraldry, when a charge is repeated an indefinite number of times so as to produce the appearance of a pattern, the term *semé* (sometimes *aspered* or *powdered*) is applied to it. When a field is *semé*, it is treated as if it were cut out of a larger extent of surface, some of the charges being divided by the outline of the shield. The term *crusilly* denotes *semé* of cross crosslets, and *billetty* *semé* of billets.

Semendria. A frontier fortress of the principality of Servia, on the right bank of the Danube, 28 miles southeast of Belgrade. It has frequently been stormed by the nations who have contended for the Danube from the Middle Ages to the present century.

Seminara. A town of Naples, province of Calabria Ultra II. Near here Gonsalvo de Cordova, the great captain, was defeated by the French, in 1495; but defeated them April 21, 1503.

Seminole. A tribe of Indians who formerly inhabited Central Florida, but now located on a reservation in the Indian Territory. During the time they were in Florida they became allies of the British in their incursions into Georgia during the Revolutionary war. They commenced a series of border-forays in 1794, when their numbers were largely increased by fugitive slaves and negroes; their force was also augmented by the Creeks in 1808. They invaded the frontiers of Georgia in 1812 and 1817, when they massacred a number of persons; but were speedily punished by Gen. Gaines and subsequently by Gen. Jackson. Florida was purchased by the United States in 1819, and the Seminoles made treaties with the United States a few years afterwards. The government resolved to move the Seminoles to a reservation beyond the Mississippi, in conformity with a treaty signed in 1832, but the Indians, headed by Osceola, their chief, resisted, which gave rise to a prolonged bloody

war, which began in December, 1835. This war cost the U. S. government \$10,000,000 and 1500 lives. The greater portion of the Seminoles were subdued and transported beyond the Mississippi in 1842, only about 800 remaining in the Everglades of Florida, under their chief, Billy Bowlegs. The Seminoles on their new reservation in Indian Territory were divided in their sentiments during the civil war, some of them taking up arms for the South; a civil contest ensued, in which those remaining loyal to the Union were defeated with great slaughter in December, 1861. After the civil war the two bands were reunited and purchased a reservation from the Creeks, where they are now industrious and prosperous. In 1870 they numbered 2553.

Semi-steel. See **ORDNANCE, METALS FOR, STEEL.**

Sempach. A small town of Switzerland, in the canton of Lucerne, situated on the eastern shore of the Lake of Sempach. It was one of the outposts of the confederate cantons against their Suabian and Austrian assailants in the 14th century. Under the walls of Sempach took place the second great conflict of the confederate Swiss cantons with Austria, in which the nobles of Austria, in spite of their valor and overwhelming numbers, were slaughtered like sheep by the Swiss. The Swiss lost but 200 men, while the loss of the Austrians was ten times as great. The anniversary of this great victory is still celebrated by prayer and thanksgiving on the field of battle.

Sena. A town on the coast of Umbria, at the mouth of the small river Sena, was founded by the Senones, a Gallic people, and was made a colony by the Romans after the conquest of the Senones, 288 B.C. In the civil war it espoused the Marian party, and was taken and sacked by Pompey.

Seneca Indians. One of the tribes of the Six Nations, and the most numerous and warlike of that confederation. When they first became known they were located in the region between the Lakes of Cayuga, Seneca, Canandaigua, and Ontario. In the 17th century they waged successful wars against the Hurons and other tribes to the westward, and finally the defeated tribes were adopted by the Senecas, who by this means of recruiting their ranks became a powerful people. They were firm allies of the English, as was attested in several battles against the French, and took a valiant part in the memorable battle wherein Gen. Braddock was killed; they again suffered severely in the campaign led by Gen. Sullivan in 1779. They removed to Lake Erie in 1784. The Senecas were allies of the Americans in the war of 1812-14. In 1870 there were 240 Senecas on a reservation in Indian Territory, and 3017 on a reservation in the State of New York.

Seneffe, or Senef. A town in the province of Hainault, Belgium, about 11 miles northwest of Charleroi. Seneffe is notable

for its proximity to the battle-field on which William of Orange (III. of England), at the head of the forces of the coalition against France, fought the French army under the great Condé, August 11, 1674. In William's army there were four lieutenants,—Montecuculi, Duke Charles of Lorraine, the Prince of Waldeck, and the Prince of Vaudemont, the first three of whom subsequently attained prominence as military commanders. Of the allied forces of 60,000 men, the Dutch lost from 5000 to 6000 men, the Spaniards 3000, and the Imperialists 600; while the French army, which entered into the conflict 80,000 strong, could scarcely muster 20,000 after the battle. Under the walls of Seneffe, Moreau, in 1794, defeated the Austrians.

Senegal. French colonies on the river of that name in Senegambia, West Africa, settled about 1626; several times taken by the British, but recovered by the French, to whom they were finally restored in 1814.

Seneschal. In the origin of the office, probably an attendant of the servile class, who had the superintendence of the household of the Frankish kings. In the course of time, however, the seneschalship rose to be a position of dignity, held no longer by persons of servile race, but by military commanders, who were also invested with judicial authority. The lieutenants of the great feudatories often took the title of seneschal. A similar office in England and Scotland was designated steward.

Seniority. Priority of rank and standing in the army. As regards regiments, this precedence is regulated by the number of the corps; among individuals, it is decided by the date of the commission. Where commissions of the same date interfere, reference is to be had to the dates of former commissions.

Senones. A powerful people in Gallia Lugdunensis, dwelt along the upper course of the Sequana (now *Seine*). A portion of this people crossed the Alps about 40 B.C., in order to settle in Italy; but the greater part of Upper Italy being already occupied by other Celtic tribes, the Senones were obliged to penetrate a considerable distance to the south, and took up their abode on the Adriatic Sea, between the modern Ravenna and Ancona. They extended their ravages into Etruria; and it was in consequence of the interference of the Romans while they were laying siege to Clusium, that they marched against Rome and took the city, 390 B.C. They were defeated by Camillus, 367 B.C. They defeated Metellus, the consul, at Arretium, 284, but were almost exterminated by Dolabella, 283. They invaded Greece in 279; were defeated by Antigonus Gonatus, 278, and sued for peace. See **ROME**.

Sent to the Front. A term applied to bodies of troops or individual soldiers when ordered from camp or garrison to the scene of active hostilities.

Sent to the Rear. A term applied to bodies of troops or individual soldiers when

ordered from the immediate scene of active hostilities to the rear of the command in which they are serving, so as to be out of immediate danger.

Sentence. Decision, determination, final judgment. There is an appeal allowed from the sentence of a regimental court-martial to the opinion of a general one.

Sentinel, or Sentry (from the Lat. *sentire*, "to feel or perceive," through the Ital. *sentinella*). A private soldier, marine, or sailor, posted at a point of trust, with the duty of watching the approach of an enemy, or any person suspected of hostile intentions. Sentinels mount guard over dépôts of arms, the tents of commanding officers, etc. During the night, each sentinel is intrusted with the "word," or countersign; and no person, however exalted in position, may attempt to approach or pass him without giving that as a signal. In such case, the sentinel is bound to arrest the intruder, and if necessary to shoot him. It has happened before now that the commander-in-chief of an army has been prisoner in the hands of one of his own sentinels. When an army is in the field, the sentinels are its eyes, for they guard the approaches in every direction some distance in front of the main body of troops. In the event of an attack, they give the alarm, and retire slowly on their supports. There is usually an agreement, tacit or expressed, between commanders that their outlying sentinels shall not fire upon one another, which would only be productive of useless bloodshed. Under martial law, death is the penalty to a sentinel sleeping on post. Sentinels will present arms to general and field-officers, to the officer of the day, and the commanding officer of a post; to all other officers they will carry arms. Staff-officers above the rank of captain are entitled to the same compliments from sentinels as are given to field-officers.

Sentinum, Battle of. See *ROMÆ*.

Sentry. The same as sentinel. "Sentry go," is the warning given by the sentry at the guard-room or tent that it is time to relieve sentries.

Sentry-box. A box to cover a sentinel at his post, and shelter him from the weather.

Sepadar. Is an East Indian term for an officer of the rank of brigadier-general.

Sepahi. An East Indian term for a feudatory chief, or military tenant; a soldier.

Sepoy. Corrupted from the Indian word *sipahi*, "a soldier." This word *sipahi*, in its more familiar form of *spahis*, is known in most Eastern armies; and is itself derived from *sip*, "a bow and arrow," the ordinary armament of an Indian soldier in ancient times. The word *Sepoy* now denotes a native Hindoo soldier in the British army in India. The Sepoys consist of Moham-medans, Rajpoots, Brahmans, and men of other castes, besides Sikhs, Ghoorkas, and men of various hill-tribes. They are generally officered by Europeans.

Septembrizers. In the French revolu-

tion a dreadful massacre took place in Paris, September 2-5, 1792. The prisons were broken open and the prisoners butchered, among them an ex-bishop, and nearly 100 non-juring priests. Some accounts state the number of persons slain at 1200, others at 4000. The agents in this slaughter were named Septembrizers.

Sepulchre, Knights of the Holy. A military order, established in Palestine about the year 1114. Those of this class chose Philip II., king of Spain, for their master, in 1558, and afterwards his son; but the grand master of the order of Malta prevailed on him to resign; and when afterwards the Duke de Nevers assumed the same quality in France, the same grand master, by his interest and credit, procured a like renunciation by him, and a confirmation of the union of this order to that of Malta.

Sequani. A Celtic nation of ancient Gaul. Before the conquest of Gaul by Cæsar, the Arverni and Ædui, the two most powerful nations of that country, were in a state of hostility; and the Sequani allied themselves with the former. In order more effectually to crush their enemies, these two nations hired a large body of Germans, under Ariovistus, from over the Rhine. With their assistance they totally defeated the Ædui; but the Germans seized for themselves a third part of the territory of the Sequani, and would have made further encroachments, had not Cæsar defeated them, and expelled them from the land.

Serakhur, Serang. In the East Indies are non-commissioned officers who are employed in the artillery and on board ships of war. In the artillery the former title answers to that of sergeant; in the naval service the latter to that of boatswain.

Seraphim, or Jesus, Order of The. An ancient Swedish order of knighthood, instituted in 1334; but dormant from the period of the Reformation until 1748. The number of knights, besides the king and members of the royal family, is limited to 24.

Seraskier, or Seri-Asker (*Pers.* "head of the army"). The name given by the Turks to every general having the command of a separate army, and, in particular, to the commander-in-chief or minister of war. The seraskier, in the latter sense, possesses most extensive authority, being subordinate only to the sultan and grand vizier. He is selected by the monarch from among the pashas of two or three tails.

Seraskur (*Ind.*). This word is sometimes written *seraskier*, and signifies the commander-in-chief of a Turkish army.

Serdans. Colonels in the Turkish service are so called.

Seregno. A town in the province of Milan, Italy, 13 miles north from Milan. It is noted for the heroic resistance which the women of the city made against the conscription, and which ultimately induced

Bonaparte to rescind his order for the bombardment of the place. The Austrians, in 1848, severely chastised Seregno for its patriotism.

Sergeant. A non-commissioned officer in a company, battery, or troop, usually selected from among the corporals on account of his general intelligence and good conduct. He is vested with the command of small detachments, and sometimes with his company in the absence of his superior officers.

Sergeant, Armorer-. In the British service, is a trained artificer who repairs the arms of a corps.

Sergeant, Band-. In the British service, is a non-commissioned officer who is responsible for the discipline of the band, as is the bandmaster for instruction. In the United States service a principal musician performs this duty.

Sergeant, Color-. See COLOR-SERGEANT.

Sergeant, Cook. In the British service, is a non-commissioned officer who superintends the cooking for the corps.

Sergeant, Covering. Is a non-commissioned officer, who, during the exercise of a battalion, regularly stands or moves behind each officer commanding or acting with a platoon or company.

Sergeant d'Armes (sergeant of arms), Fr. Philip Augustus, fearing to be assassinated on the instigation of the sheik of the mountain, during his stay in Palestine, organized for the protection of his person a corps of *sergeants d'armes*, consisting of gentlemen, which he armed with bronze war-clubs, and bows and arrows, whose duty it was to accompany him everywhere.

Sergeant, Drill-. See DRILL-SERGEANT.

Sergeant, Hospital. In the British service, is a non-commissioned officer who carries out the orders of the surgeon as regards discipline in a hospital.

Sergeant Instructor in Fencing. In the British service, is a sergeant who performs the duties implied by his title in regiments of cavalry.

Sergeant Instructor in Gunnery. A sergeant of artillery who aids the officer instructor in teaching gunnery.

Sergeant, Lance-. Is a corporal who acts as a sergeant in a company, but only receives the pay of a corporal.

Sergeant-Major. The chief non-commissioned officer in a regiment, and, from the nature of his duties, in a great degree an assistant to the adjutant. He must be master of every point connected with the drill, interior economy, and discipline of a regiment. It is his duty, on receiving the orders from the adjutant, to assemble the orderly sergeants, and issue the orders and details correctly. He is to keep a regular duty roster of the sergeants and corporals, and to proportion the number of men to be furnished for duty according to the strength of their respective companies. Finally, it is always expected that he should set an ex-

ample to the non-commissioned officers by his activity, zeal, and personal appearance. In the British cavalry service this non-commissioned officer is termed regimental sergeant-major, the chief non-commissioned officer of a troop being styled troop sergeant-major. Similarly in the artillery there are the brigade sergeant-major and the battery sergeant-major.

Sergeant, Orderly. See ORDERLY SERGEANT.

Sergeant, Pay-. See PAY-SERGEANT.

Sergeant, Paymaster-. See PAYMASTER-SERGEANT.

Sergeant, 'Pioneer. See PIONEER SERGEANT.

Sergeant, Quartermaster. See QUARTERMASTER SERGEANT.

Sergeant, White. Is a term of ridicule in the British service, applied to those ladies who, taking advantage of the weakness of their husbands, neglect their domestic concerns to interfere in military matters.

Seringapatam (anc. *Sri-Rungaputtan*, "City of Vishnu"). A celebrated fortress of South India, and under Hyder Ali and Tippoo Sahib, the capital of Mysore, at the west angle of the island of the Cavery (Kaveri). Seringapatam was besieged by Lord Cornwallis in 1791, and again in 1792, when Tippoo purchased a peace by ceding half his dominions and paying 380 lacs of rupees to the British and their allies. It was again besieged in 1799 and taken by storm on May 3 (4), on which occasion Tippoo was killed, and the dynasty of Hyder terminated; the ancient Rajpoot line being restored to the sovereignty of Mysore.

Serjeant. See SERGEANT.

Serpenteau (Fr.). A round iron circle, with small spikes, and squibs attached to them. It is frequently used in the attack and defense of a breach. It likewise means a fusee, which is filled with gunpowder, and is bent in such a manner, that when it takes fire, it obtains a circular rapid motion, and throws out sparks of light in various directions.

Serpentine (Fr.). An ancient wall-piece, with a matchlock, carrying an 8-ounce leaden ball, with a charge of 4 ounces of powder. It was 6 or 7 feet long, and weighed from one to two hundred-weight.

Serpentix (Fr.). Cock of the ancient matchlock, also the lock itself. Also, an ancient 24-pounder gun, of 18 feet, weighing 4860 pounds, whose dolphins represented the figures of serpents.

Serre-demi File (Fr.). That rank in a battalion which determines the half of its depth, and which marches before the demi-file. Thus a battalion standing six deep, has its *serre-demi file* in the third rank, which determines its depth.

Serre-file (Fr.). The last rank of a battalion, by which its depth is ascertained, and which always forms its rear. When ranks are doubled, the battalion resumes its natural formation by means of the *serre-*

fles. *Serre-file* literally signifies a "bringer up."

Servans d'Armes, or Chevaliers Servans (Fr.). Were persons belonging to the third class of the order of Malta. They were not noblemen, although they wore the sword and the cross.

Servants. In the British service, regimental and staff officers are allowed the indulgence of a steady and well-drilled soldier for a servant; and field-officers, keeping horses, two each. These soldiers are to take their share of any duty on which the officer to whom they are attached is employed, and they must fall in with their respective troops and companies at all reviews, inspections, and field-days. In the U. S. service, officers are not permitted to employ soldiers as servants.

Serve. To be in service; to do duty; to discharge the requirements of an office or employment; and, specifically, to act as a soldier, seaman, etc. *To serve a piece*, in the artillery, is to load and fire with promptitude and correctness. *To serve the vent*, to stop it with the thumb.

Servia. One of the Danubian principalities, nominally included in the Ottoman empire, but in reality only tributary to that power. It is bounded on the north by Austria, on the east by Wallachia and Bulgaria, on the south by Rumli and Bosnia, and on the west by Bosnia. In the earliest times of which we have any record, Servia was inhabited by Thracian or Illyrian races; shortly before Christ it was subjugated by the Romans, and formed part of the province of Illyricum, whose fortunes it shared during the vicissitudes of the empire. Overrun successively by the Huns, Ostrogoths, Longobards, etc., it reverted to the Byzantine rulers about the middle of the 6th century, but was wrested from them by the Avars in the 7th century, who in turn were routed by the Serbs, and compelled to give up the country. They were converted to Christianity in the 9th century, but this did not in the least abate their ardor for battle, and for nearly 200 years they were almost constantly at war with the neighboring Bulgarians,—the inveterate enemies of their Byzantine liege lord. In 1048, however, the royal governors were expelled, and they became an independent kingdom. For the next 100 years the Serbs had to fight hard to maintain their independence, and the struggle terminated in their favor; and in 1165, Stephen Nemanja founded a dynasty which lasted for two centuries, during which period the kingdom of Servia attained the acmé of its power and prosperity. Eventually the progress of the Turks, however, was fatal to its welfare, and in 1889 King Lazar fell in the disastrous battle at Kossovapolje. Sultan Bajazet divided the country between Lazar's son and son-in-law, compelled them to pay tribute and follow him in war. Gradually the Serbs sunk more and more under the Turkish yoke, until, in 1459, Servia was

thoroughly subjugated by the sultan Mahmoud. It was uniformly the theatre of the bloody wars between Hungary and Turkey, and frequently suffered the uttermost horrors of devastation. Prince Eugène's brilliant successes for a moment flashed a ray of hope into the miserable hearts of the long-suffering Serbs, and by the treaty of Passarowitz (1718), a considerable portion of the country was made over to Austria; but in 1789 it reverted to Turkey, and for the next sixty years the cruelty and oppressions of the pashas and their Janissaries surpass all belief. At length the unhappy people could endure the tyranny of their foreign masters no longer, and in 1801 an insurrection broke out, headed by George Czerny, which, by the help of Russia, ended in the triumph of the patriots, and in the election of Czerny by the people as prince of Servia. The invasion of Russia by France, however, left the Serbs at the mercy of their late rulers and the war again broke out. Czerny was forced to flee, and the tyranny of the Turks became more ferocious than ever. Again the people flew to arms under the leadership of Milosch Obrenovitch, and were a second time successful in winning back their liberties. Milosch ruled as prince of Servia until 1839, when he was forced to abdicate; but in 1858 he was restored to his former dignity. In the war between Russia and Turkey in 1876, the Servians took the side of the former, but were not actively engaged.

Service. In a military sense is the art of serving the state in war. All studies, acts, and efforts of the profession of arms have this end in view. To belong to the army and to belong to the land service, are the same thing. In a more restricted sense, service is the performance of military duty. In its general sense, service embraces all details of the military art. But in its restricted sense, actual service is the exercise of military functions. *To see service*, is a common expression denoting actual collision with an enemy. *To retire from service*, to quit the army, or resign.

Service, Foreign. See FOREIGN SERVICE.

Service, Home. See HOME SERVICE.

Service, Secret. Any service performed by an individual in a clandestine secret manner. It likewise means intelligence or information, given by spies when countries are engaged in war, for which they receive pecuniary compensation.

Serviceable. Capable of performing all military duty, or of being used in the military service.

Servile or Slave War. See ROME.

Session. The actual sitting of a court, council, etc., or the actual assembly of the members of such a body for the transaction of business. Hence, also the time, period, or term during which a court, council, and the like, meet daily for business; or the space of time between the first meeting and prorogation or adjournment.

Sestus. A town in Thrace, situated at the narrowest part of the Hellespont, opposite Abydos in Asia, from which it was only seven stadia distant. It was always reckoned a place of importance in consequence of its commanding, to a great extent, the passage of the Hellespont. It was for some time in possession of the Persians, but was retaken by the Greeks, 478 B.C., after a long siege. It subsequently formed part of the Athenian empire.

Set. A word used in a military sense in various combinations; as, to set a sentinel, is to place a soldier at any particular spot for its security. To *set on*, is to attack. To *set at defiance*, is to defy, to dare to combat, etc. To *set up*, is to make a man fit for military movements and parade.

Seteef, or Setif (anc. *Sitipha*, or *Sitif*). A town of Algeria, distinguished by the obstinate resistance it made against the Saracens, when Northern Africa was overrun by that fierce and warlike people. The old city is now in ruins.

Setendy. In the East Indies, the militia is so called.

Setia. An ancient town of Latium, in the east of the Pontine Marshes; originally belonged to the Volscian confederacy, but was subsequently taken by the Romans and colonized. It was here that the Romans kept the Carthaginian hostages.

Setter. In gunnery, a round stick, to drive fuzes, or any other compositions, into cases of paper.

Sevastopol. See SEBASTOPOL.

Seven Weeks' War. The war declared by Prussia, on June 18, 1866, which ended in the total defeat of Austria and her allies. See PRUSSIA.

Seven Years' War. This was the third, last, and by far the longest and most terrible of the contests for the possession of Silesia. This long and desperate war was maintained by Frederick II. of Prussia against Austria, Russia, and France, from 1756 to 1763. It made no change in the territorial distribution of Europe, but it increased tenfold the moral power of Prussia, and gave its army a prestige it retained till the battle of Jena. It cost Europe 1,000,000 lives, and prostrated the strength of almost all the powers who had engaged in it.

Seville, or Sevilla (anc. *Hispalis*, or *Hispal*). A famous city of Spain, capital of the province of the same name, on the left bank of the Guadalquivir, 60 miles north-northeast of Cadiz. It was captured by Julius Caesar, 45 B.C. It surrendered to the Moors at once, after the defeat of Don Roderick on the Guadalete, and it continued its allegiance to the caliph of Damascus until 756; it surrendered to Ferdinand III. of Castile on November 23, 1248, when 800,000 Moors left for Granada and Africa. In 1810 it was taken and ravaged by Soult. It was taken by assault by the British and Spaniards, August 27, 1812. It capitulated to Espartero in 1848. The peace of Seville be-

tween England, France, and Spain, and also a defensive alliance to which Holland acceded, was signed November 9, 1729.

Sevir. A captain of cavalry among the Romans was so called.

Sextant. An instrument of reflection for measuring angular distances between objects. It is constructed on the same optical principle as Hadley's quadrant, but usually of metal, with a nicer graduation, telescopic sight, and its arc the sixth, and sometimes the third part of a circle.

Seymeny-bassy. Appellation given to the lieutenant-general of Janissaries in the Turkish service.

Shabrack, or Shabraque. A Hungarian term, generally used among cavalry officers, to signify the cloth furniture of a troop-horse.

Shaft. A body of a long, cylindrical shape; a stem, stalk, trunk, or the like. Hence, the stem of an arrow, upon which the feather and head are inserted; hence, an arrow; a missile weapon. Also, the handle of a weapon; as, the shaft of a spear. It likewise means a perpendicular excavation into the earth for the purpose of mining.

Shafted. In heraldry, borne on a shaft;—applied to a spear-head.

Shaftesbury. A town of England, in Dorsetshire, 95 miles southwest of London. It was destroyed by the Danes both before and after 888, but each time it was afterwards restored.

Shag-bush. An old term for a hand-gun.

Shahporee, or Shapuree. An island of British Burmah, lying off the coast of Arakan. The capture of this island by the Burmese led to the first British war with that nation, in 1824.

Sham. False; counterfeit; pretended; as, a sham fight.

Shamaka, Shamachi, or Shemakha. A town of Russia in Asia, Transcaucasia, 207 miles east-southeast from Tiflis. It was taken and sacked by Nadir Shah in 1734.

Shambrie. In the manège, is a long thong of leather, made fast to the end of a cane or stick, for the purpose of animating a horse, or of punishing him if he refuses to obey the rider.

Shang-hae, or Shanghai. A seaport city of China, in the province of Kiangsu, on the river Woo-sung, one of the five ports opened for European commerce. It was captured by the British, June 19, 1842, by the Taiping rebels, September, 1853; retaken by the imperialists, 1855. The rebels were defeated near here by the English and French, allies of the emperor, March 1, 1862.

Sharp. Fierce; ardent; fiery; violent; impetuous. "In sharp contest of battle."

Sharps Rifle. One of the oldest of successful breech-loading rifles. The chamber of this piece is fixed, and the barrel closed by a vertical sliding breech-piece, which moves nearly at right angles to the axis of the piece. The fire-arm is loaded by depressing the lever, or trigger-guard, which with-

draws the slide and opens the breech for the insertion of the cartridge. Originally a paper cartridge was used, the rear end of which was broken open by the breech-piece in closing; this was superseded by a linen cloth cylinder to contain the powder, one end of which overlaps and is gummed to the base of the bullet; the other is closed with a layer of thin bank-note paper. The flame of the percussion-cap penetrates through this paper and ignites the powder. The linen case is carried out with the bullet and drops to the ground a short distance in front of the piece. A metallic cartridge is now used.

Sharpsburg. See ANTIETAM CREEK.

Sharpshooters. An old term applied in the army to riflemen.

Sharp-shooting. A shooting with great precision and effect.

Shawnees. A tribe of American Indians, which were first known on the banks of Fox River, Wisconsin, in 1648. They were a warlike tribe, and waged war with the Iroquois. The Shawnees eventually became a scattered race, and dispersed to several parts of the country; we find a part of them afterwards taking part with the French in their wars in America; joined in Pontiac's conspiracy, but were subdued by Col. Boquet. They took a prominent part in the Western wars, especially against the expeditions of Harmer, Wayne, etc.; but made peace at Greenville in 1795. They afterwards effected an alliance with some tribes of Northwestern Indians, and under their celebrated leader Tecumseh gave battle to the whites under Gen. Harrison, at Tippecanoe, but were defeated. Tecumseh, with a band of Shawnees, proceeded to Canada at the outbreak of the war of 1812, and made an alliance with the English, who gave him a brigadier-general's commission; he was killed while leading the right wing at the battle of the Thames in 1813. Since then the Shawnees have again reunited and are now upon reservations in Indian Territory, and numbered in 1870 about 800.

Sheaf. A bundle of arrows.

Sheathe. To put into a sheath, case, or scabbard; to inclose or cover with a sheath or case. *To sheathe the sword,* to put an end to war or enmity; to make peace.

Sheeting. The term sheeting is applied to the coarse hempen cloth used for making tarpaulins.

Sheffield. A large town of England in the West Riding of Yorkshire, at the confluence of the Sheaf and Don, 48 miles southwest from York. During the civil wars in the time of Charles I., the castle sustained a long siege for the king, but scarcely a vestige of it can now be discerned.

Shell. To throw shells or bombs upon; to bombard; as, to shell a town.

Shell Extractor. An instrument for extracting headless cartridge-cases from breech-loading small-arms.

Shell-hooks. See IMPLEMENTS.

Shelling. The act of bombarding a fort, town, or position.

Shell-jacket. An undress military jacket.

Shell-plug Screw. See IMPLEMENTS.

Shell-proof. Capable of resisting bomb-shells.

Shells. Hollow projectiles; also, the cases of metallic cartridges for use in small-arms. See PROJECTILES.

Shelter. In a military sense, that which protects the troops in the field. There are various means resorted to for this purpose. A common arrangement is as follows: A cross-bar is supported by two uprights; against this cross-bar a number of poles are made to lean; on the back of the poles abundance of fir branches are laid horizontally; and lastly, on the back of the fir branches is another set of leaning poles, in order to make all secure by their weight. A cloth of any kind is made use of to give shelter by an arrangement of this kind. The corners of the cloth should be secured by a simple hitch in the rope, and not by a knot. The former is sufficient for all purposes of security, but the latter will jam, and you may have to injure both cloth and string to get it loose again. It is convenient to pin a skewer in the middle of the sides of the cloth, round the ropes.

Shelter-tents affording an excellent protection for 6 soldiers may be made as follows: Three tent-sticks are fixed into the ground, whose tops are notched; a light cord is then passed round their tops, and fastened into the ground with a peg at each end. Two sheets are then buttoned together and thrown over the cord, then two others, which are buttoned to the previous ones. Lastly, another sheet is thrown over each of the slanting cords, and buttoned to the others. The sides of the tent are, of course, pegged to the ground. There are many modifications in the way of pitching these tents. For want of sticks muskets can be used.

Huts are also frequently used as a means of protection by troops, as there is scarcely any place which does not furnish materials for their construction.

Walls.—Those principally in use are as follows: Skins, canvas, felt, tarpaulin, bark, reed mats, reed walls, straw walls, wattle-and-dab, log huts, fascines or fagots, boards, etc., fastened by malay-hitch, brick, sunburnt or baked, turf, stones, gabions, bags or mats filled with sand or shingle, snow huts, underground huts, tents over holes in earth.

Roofs.—Many of the above list would be perfectly suitable for roofs; in addition may be mentioned slating with flat stones, thatch, sea-weed, and wood shingles.

Straw walls of the following kind are very effective, and they have the advantage of requiring a minimum of string (or substitute for string) in their manufacture. The straw or herbage of almost any description is simply nipped between two pairs of long sticks, which are respectively tied together

at the two ends, and at a sufficient number of intermediate places. The whole is neatly squared and trimmed. A few of these would help in finishing the roof or walls of a house. They can be made movable so as to suit the wind, shade, and aspect. Even the hut door can be made on this principle.

Malay hitch is the name given to a wonderfully simple way of attaching together wisps of straw, rods, laths, reeds, planks, poles, or anything of the kind into a secure and flexible mat; the sails used in the far East are made in this way, and the movable decks are made of bamboos joined together with a similar but rather more complicated stitch.

Shenandoah. A river of Virginia, United States, the largest tributary to the Potomac, drains the beautiful and fertile valley between the Blue Ridge and the principal range of the Alleghenies. In the war of 1861-65, this valley was the scene of numerous conflicts, was successively occupied by the opposing armies, and finally laid waste by Gen. Sheridan in the autumn of 1864.

Shield. A piece of defensive armor, borne on the left arm, to ward off the strokes of the sword and of missiles. It has been constantly used from ancient times, through the Middle Ages, till the invention of fire-arms. The large shield worn by the Greeks and Romans (*clipeus*) was circular, and often ornamented with devices. Another form of shield (*scutum*) was used by the Roman heavy-armed infantry, square, but bent to encircle the body. The early shield or knightly escutcheon of the Middle Ages was circular in outline, and convex, with a boss in the centre; the body generally of wood, and the rim of metal. There were many other kinds of shields, made of leather, wood, basket-work, etc., employed up to the introduction of fire-arms, when they became practically useless, although some savage nations employ shields at the present time.

Shield. To cover, as with a shield; to cover from danger; to defend; to protect; to secure from assault or injury.

Shift. In a military sense, to change place or station. Hence, to shift quarters.

Shiloh. A locality in Tennessee, a few miles from Pittsburg Landing, situated on the Tennessee River. Here on April 6-7, 1862, a great battle was fought between the Union troops under Grant and the Confederate army under Albert Sydney Johnston and Beauregard. The Confederates began the attack, taking the Union forces by surprise, who, after a brave resistance during the first day, were compelled to retire before the victorious Confederates, who, however, lost their gallant chief, Gen. Johnston. The Federals having been reinforced during the night, commenced the attack on the 7th, along the whole of the rebel line, which was resisted gallantly, and the field was stubbornly contested until about 4 o'clock in the afternoon, when the Union army regained their lines of the day before, and

drove the enemy off the field. The Confederates retreated to Corinth. The loss of the Confederates was 1785 killed, about 8000 wounded, and 960 missing. Grant's loss was estimated at something under this number.

Shirvan, or Shirwan. A province of Russia in Asia, in the country of the Caucasus. Shirvan formed until the 6th century a part of the monarchy of Armenia; but was afterwards conquered by the Persians, and made a part of that empire under Khosroo Nooshirvan, who called this country after his name. The rulers of Shirvan carried on many wars with Persia, over which country they repeatedly gained great advantages. Finally, in the end of the 15th century, it was completely brought under Persian sway. The Russians gradually invaded the country, and it was ceded to them in 1812.

Sholapore. Capital of the collectorate of the same name, in British India, in the Presidency of Bombay. It is strongly fortified, and was taken by escalade by a British force under Gen. Pritztler.

Shoomla. See SCHUMLA.

Shoot. To let fly or cause to be driven with force, as an arrow or bullet;—followed by a word denoting the missile, as an object. Also, to discharge, causing a missile to be driven forth;—said of the weapon or instrument, as an object; as, to shoot a gun and the like.

Shooter. One who shoots; an archer; a gunner; a shot. Also, that which shoots; as, a fire-shooter.

Shooting-iron. A fire-arm is sometimes so called.

Shoshones, or Snakes. A tribe of North American Indians inhabiting the country between the Sierra Nevada and the Rocky Mountains, and from Idaho southward into Utah. They have generally been peaceable; but they collided with the whites on several occasions, which resulted disastrously for them, several of their bands being almost annihilated. Treaties were formed with them on several occasions between 1863 and 1868, and attempts have been made to place them upon reservations. All the property of a dead Shoshone is buried with him, and formerly his favorite wife and horse were killed over the corpse. In 1870 they numbered about 4000 souls.

Shot. See PROJECTILE.

Shot. The act of shooting; discharge of a missile weapon. Also, the flight of a missile weapon, or the distance which it passes from the engine; as, a cannon-shot; a musket-shot, etc. Also, a marksman; one who practices shooting; as, an excellent shot.

Shot. To load with shot over a cartridge; as, to shot the guns.

Shot, Canister. See CANISTER-SHOT.

Shot, Case. See CASE-SHOT.

Shot, Chain. See CHAIN-SHOT.

Shot, Grape. See GRAPE-SHOT.

Shot-belt. A belt having a pouch for carrying shot.

Shot-gauge. An instrument for measuring the diameter of round-shot.

Shot-tower. A lofty tower for making shot, by dropping from its summit melted lead, which cools in the descent, and is received into water or other liquid.

Shoulder. The upper part of a blade of a sword. Also, the salient angle of the flank of a bastion. *To shoulder*, to lay on the shoulder, or to rest anything against it. Hence, to shoulder arms, a word of command in the manual exercise.

Shoulder-belt. See BELTS.

Shoulder-knot. An ornamental knot of gold cord on cloth of the same color as the facings of the arm to which the officer belongs, with insignia of rank and number of regiment embroidered on the cloth ground. They are worn on the shoulder by commissioned officers of the army, and are sometimes embroidered. A kind of epaulette.

Shoulder-strap. A narrow strap, $1\frac{1}{2}$ inches wide by 4 inches long, bordered with an embroidery of gold $\frac{1}{2}$ inch wide. It is worn on the shoulder of a commissioned officer in the army, indicating by a suitable device the rank he holds in the service. See RANK, INSIGNIA OF.

Shrapnel. See PROJECTILE, SMOOTH-BORE PROJECTILES.

Shrewsbury. An ancient town of England, in Shropshire, on the Severn. It was the scene of many military events, the inhabitants always taking an active share in the various contests of the most turbulent period of English history, from the conquest to the civil war. It was taken by Llewellyn the Great, prince of North Wales, in 1215, during the disturbances between King John and the barons. The famous battle of Shrewsbury, in which Henry IV., then prince of Wales, first distinguished himself in the field, and the fiery Hotspur was slain, was fought in 1403.

Shropshire, Battle of. In which the Britons were completely subjugated, and Caractacus, the renowned king of the Silures, became, through the treachery of the queen of the Brigantes, a prisoner to the Romans.

Shunt Gun. A rifled fire-arm having two sets of grooves, down one of which the shot is passed in loading, and along the other of which it passes out when fired, having been shunted from one set to the other, when at the bottom, by turning upon its axis.

Shuternaul. In the East Indies, is a sort of arquebuse, which is fixed upon the back of a camel.

Siberia, or Siberi. A vast territory in Northern Asia, belonging to Russia, and including all the Russian possessions in that continent, with the exception of the Transcaucasian and Armenian provinces. Siberia seems to have been first made known to the Russians by a merchant named Anika Stroganoff; and soon after the conquest of West Siberia was effected by the Cossack Vassili

Yermak, an absconded criminal, at the head of a numerous band of wild followers. After Yermak's death, in 1654, the Russians pursued their conquests eastward, founding Tomsk in 1604, and though they often experienced serious reverses, their progress was rapid, the Sea of Okhotsk being reached in 1689, and Irkutsk founded in 1661. Frequent disturbances have occurred between the Russians and the Chinese and Tartars, which have resulted in the extension southward of the Siberian boundary into Manchuria and Turkestan.

Sicarii (i.e., Assassins). The name given by the Romans to certain savage mountain tribes of the Lebanon, who were, like the *Thugs* of India, avowed murderers by profession. In the same mountains there existed, at the time of the Crusades, a branch of the fanatic sect called "Assassins," whose habits resembled those of the Sicarii, and whose name the Crusaders imported into Europe; but these were of Arabian origin.

Sicilian Vespers. The name given to the massacre of the French in Sicily, on the day after Easter (March 30), 1822, the signal for the commencement of which was to be the first stroke of the vesper-bell. On the evening of Easter Monday, the inhabitants of Palermo, enraged (according to the common story) at a gross outrage which was perpetrated by a French soldier on a young Sicilian bride, suddenly rose against their oppressors, the French, and put to the sword every man, woman, and child, and did not even spare those Italians and Sicilians who had married Frenchmen. This example was followed by Messina and other towns, and the massacre soon became general over the island. The French were hunted like wild beasts, and dragged even from the churches, where they vainly thought themselves secure. More than 8000 of them were slain by the Palermitans alone. This event was the final overthrow of Charles of Anjou's domination in Sicily.

Sicily (anc. Sicilia). The largest island in the Mediterranean Sea, situated between Italy and the coast of Africa, and separated on the northeast from Naples by the Strait of Messina; it is a province of the kingdom of Italy. It was successively occupied by the Phœnicians, Greeks, Carthaginians, and Romans. For history of the Carthaginians in Sicily, see CARTHAGE. The western part of Sicily was made a Roman province in 241 B.C.; but after the revolt of Syracuse in the second Punic war, and the conquest of that city by Marcellus, the whole island was made a Roman province. On the downfall of the Roman empire, Sicily formed part of the kingdom of the Ostrogoths; but it was taken from them by Belisarius in 536, and annexed to the Byzantine empire. In the 8th and 9th centuries the Saracens succeeded in conquering it. The Normans conquered the island in the 11th century under Roger Guiscard, duke of Apulia. It passed successively into the hands of France (see Si-

CILIAN VESPERs), Germany, and Spain. By the peace of Utrecht, in 1713, it was given to the Duke of Savoy; was added to the kingdom of Naples in 1720. The war of 1784, however, carried on by France and Spain against Austria, transferred the crown of Naples, or, as it was subsequently termed, of the Two Sicilies, to a branch of the royal family of Spain; it remained in their hands until the French revolution led, in 1799, to the expulsion of the royal family from Naples. In 1815, Ferdinand IV. of Naples assumed the title of Ferdinand I. of the Two Sicilies. In 1847, 1848, and 1849, the Sicilians made several attempts, in common with the Neapolitans, to rid themselves of their obnoxious monarch, Ferdinand II., but without success. The Bourbons were, however, driven from the throne by Garibaldi in 1860, and in the same year Sicily was united to the new kingdom of Italy. See **NAPLES**.

Sick and Hurt. A board so called, to which the agents, commissaries, etc., belonging to the several military hospitals in Great Britain were responsible.

Sick Call. A military call which is sounded on the drum, bugle, or trumpet, whereby the sick men are warned to attend the hospital.

Sick-flag. The yellow quarantine flag hoisted to prevent communication; whence the term of the yellow flag and yellow admirals. There are two others,—one with a black ball, the other with a square in the centre,—denoting plague or actual diseases.

Sick Report Book. A book in which the names of the men who are sick in a company, troop, etc., are entered, also the names of their diseases, and probable cause of same. This book is signed by one of the company officers to which the men belong, and the attending surgeon.

Sicyonia. A small district in the north-east of Peloponnesus. Its chief town was *Sicyon*, which was destroyed by Demetrius Poliorcetes. In the Persian war the Sicyonians sent fifteen ships to the battle of Salamis, and 800 hoplites to the battle of Plataeæ. In the interval between the Persian and Peloponnesian wars the Sicyonians were twice defeated and their country laid waste by the Athenians,—first under Tolmides in 456 B.C., and again under Pericles in 454 B.C. In the Peloponnesian war they took part with the Spartans.

Side-arms. Such arms as are suspended by the side and attached to the person, such as a bayonet or sword.

Sidon, or Zidon (now *Saida*, or *Seida*). For a long time the most powerful, and probably the most ancient, of the cities of Phœnicia. It was the chief seat of the maritime power of Phœnicia until eclipsed by its own colony, Tyre. It submitted to Shalmanezzer at the time of the Assyrian conquest of Syria. In the expedition of Xerxes against Greece the Sidonians furnished the best ships in the whole fleet. Sidon received

the great blow to her prosperity in the reign of Artaxerxes III. (Ochus), when the Sidonians, having taken part in the revolt of Phœnicia and Cyprus, and being betrayed to Ochus by their own king Tennes, burned themselves with their city, 351 B.C. It was rebuilt. On September 27, 1840, the town was taken from the pasha of Egypt by the troops of the sultan and of his allies, assisted by some ships of the British squadron, under Admiral Sir Robert Stopford and Commodore Charles Napier.

Siege (Fr. *siege*, "a seat, a sitting down"). Is the sitting of an army before a hostile town or fortress with the intention of capturing it. With certain elements, the success of a siege is beyond doubt; the result being merely a question of time. These elements are: First, the force of the besiegers shall be sufficient to overcome the besieged in actual combat, man to man. If this be not the case, the besieged, by a sortie, might destroy the opposing works and drive away the besiegers. The second element is, that the place must be thoroughly invested, so that no provisions, reinforcements, or other aliment of war can enter. The third element is, that the besiegers be undisturbed from without. For this it is essential that there shall not be a hostile army in the neighborhood; or if there be, that the operations of the besiegers be protected by a covering army able to cope with the enemy's force in the field. The ancients executed gigantic works to produce these effects. To complete the investment they built a high and strong wall around the whole fortress; and to render themselves secure from without they built a similar wall, facing outwards, beyond their own position. The first was circumvallation, the second contravallation. It was thus that Cæsar fortified himself while besieging Alexia, and maintained 60,000 men within his ring. In modern warfare it is considered preferable to establish strong posts here and there round the place, and merely sentinels and videttes between. Let us now assume that a fortress of great strength has to be reduced, and that the force of the enemy in the vicinity has been either subdued or held in check by a covering army. By rapid movements the place is at once invested on all sides. This step constitutes merely a blockade; and if time be of little importance, it is a sufficient operation, for hunger must sooner or later cause the fortress to surrender; but if more energetic measures are required, the actual siege must be prosecuted. Advantage is taken of any hidden ground to establish the park of artillery and the engineer's park; or, if there be none, these parks have to be placed out of range. The besieging force is now encamped just beyond the reach of the guns of the fortress; and their object is to get over the intervening ground and into the works without being torn to pieces by the concentrated fire of the numerous pieces which the defenders can bring to bear on every part.

With this view, the place is approached by a series of zigzag trenches so pointed that they cannot be enfiladed by any guns in the fortress. In order to accommodate the forces necessary to protect the workers, the trenches at certain intervals are cut laterally for a great length, partly encircling the place, and affording safe room for a large force with ample battering material. These are called *parallels*, and they are generally three in number. The distance of the first parallel will increase as small-arms become more deadly; but with smooth-bore muskets it has been usual to break ground at 600 yards from the covered way of the fortress, while in the case of Sebastopol, ground was broken at 2000 yards. The engineers having, by reconnoissances, decided the locality of the parallel, and taken advantage of any inequalities of surface, a strong body of men is sent to the spot soon after nightfall. The attention of the garrison is distracted by false alarms in other directions. Half the men are armed *cap-a-pie*, and lie down before the proposed parallel; while the other half, bearing each a pick and shovel, and two empty gabions, prepare for work. Each man deposits the gabions where the parapet of the trench should be. He then digs down behind them, filling the gabions with the earth dug out, and after they are filled, throwing it over them, to widen and heighten the parapet. Before daylight the working party is expected to have formed sufficient cover to conceal themselves and the troops protecting them. During the day, they—being concealed from the garrison—widen and complete their parallel, making it of dimensions sufficient to allow of wagons and bodies of troops with guns passing along. During the same night other parties will have been at work at zigzags of approach from the depots out of range to the first parallel, which zigzags will be probably not less than 1000 yards in length. As a rule, the defenders will not expend ammunition on the first parallel, for its extent (often several miles) will render the probability of doing material damage extremely small. For this reason also, the dimensions of the parapet and its solidity are of far less importance in the first parallel than in the more advanced works of attack. The first parallel being completed, the engineers select points near its extremities, at which they erect breastworks to cover bodies of cavalry, who are kept at hand to resist sorties from the garrison. The length of the parallel is usually made sufficient to embrace all the works of two bastions at least. Sites are then chosen for batteries, which are built up of fascines, gabions, sand-bags, and earth. They are placed at points in the parallel formed by the prolongation of the several faces of the bastions, ravelins, and other works of the fortress, which faces the batteries are severally intended to enfilade by a ricochet fire. Other batteries will be formed for a vertical fire of mortars.

By these means it is hoped that the traverses on the hostile ramparts will be destroyed, the guns dismounted, and the defenders dispersed, before the final approaches bring the assailants to the covered way. The sappers will now commence their advance towards the points, or salient angles, of the two bastions to be attacked. If, however, the trench were cut straight towards the fortress, its guns could easily destroy the workmen, and enfilade the approach. To prevent this, it is cut into short zigzags, the direction always being to a point a few yards beyond the outmost flanking-works of the garrison. The side of each trench nearest the fortress is protected by gabions and sand-bags, as in the case of the parallel. At intervals short spurs of trench, incipient parallels, are cut, to contain infantry, to act as guards to the sappers. The second parallel is about 800 yards from the enemy's works, and has to be more strongly formed than the first. It often terminates in a redoubt to hold some light artillery, and a strong force of infantry, who could assail any sortie in flank; or it may run into the first parallel, giving easier access for troops than through the zigzags. The second parallel is revetted with sand-bags, in which loop-holes are left for musketry. After passing the second parallel, the angles of the zigzags become more acute, to prevent enfilading. At about 150 yards, certain demi-parallels are cut, and armed with howitzer-batteries to clear the covered way, while riflemen also act from it. The third parallel is at the foot of the glacis. Thence the place, after being sufficiently battered, is taken by a storming party, who make their way over the glacis; or the covered way is topped by the double sap, which is a safer plan for the army generally, though much more deadly to the sappers. When the crest of the covered way has thus been reached, batteries of heavy artillery will be there established, for the purpose of breaching the walls of the ravelin and bastion; while at the same time miners will first seek to destroy the defenders' countermines (which would otherwise be likely to send these batteries into the air), and then will excavate a tunnel to the ditch at the foot of the counterscarp. If the breach becomes practicable, a storming party will emerge from this tunnel or gallery, and seek to carry the opposite work by hard fighting. If inner works still subsist, which would tear assailants to pieces, the double sap may be continued across the ditch, if a dry ditch, right up the breach, that counter-batteries may be formed. If the ditch be wet, means must be adopted for a causeway or a bridge. By these means, however obstinate may be the defense, if the besieging force be sufficiently strong, and aid do not arrive from without, the ultimate success of the attack becomes certain. Vauban raised attack to a superiority above defense, first by the introduction of ricochet fire, which sweeps a whole line; and secondly by originating

parallels. Before his time, the whole attack was conducted by zigzag approaches, in which the troops actually in front could be but few, and were therefore unable to withstand strong sorties of the garrison, who, in consequence, frequently broke out and destroyed the works of the besiegers, rendering a siege an operation of the most uncertain character.

Siege and Sea-coast Ammunition. See **ORDNANCE, AMMUNITION FOR.**

Siege Artillery. Is heavy ordnance used for battering purposes, and of too weighty a character to take the field. A siege-train of guns and their ponderous ammunition is usually maintained in the rear of an army, ready to be brought up for use when required. See **ARTILLERY.**

Siege Carriages. See **ORDNANCE, CARRIAGES FOR.**

Siege-train. The number and kind of pieces composing a siege-train must altogether depend on circumstances; but the following general principles may be observed in assigning the proportion of different kinds and calibers, and the relative quantity of other supplies, for a train of 100 pieces:

Guns, about three-fifths the whole number (60); *howitzers*, one-fourth (25); *mortars*, 10-inch siege, one-eighth (12), 8-inch siege, 3; *Coehorn mortars*, in addition to the 100 pieces, 6. Total number of guns, 106.

Carriages, for guns and howitzers, one-fifth spare, 102; for 10-inch mortars, one-sixth spare, 14; for 8-inch mortars, 4.

Mortar-wagons, one for each 10-inch mortar and bed, and for three 8-inch mortars and beds, 14.

Wagons, for transporting implements, intrenching and miners' tools, laboratory tools and utensils, and other stores, each loaded with about 2700 pounds,—say 140.

Carts, carrying balls, etc., on the march, 50.

Park battery-wagons, fully equipped, 28.

Park forges, fully equipped, 8.

Sling-carts, large, 5.

Sling-carts, hand, 4.

Total number of carriages, 369.

Draught-horses, for each gun and howitzer, with its carriage, 8; for each spare gun-carriage, 6; for each mortar-wagon, 8; for each battery-wagon, 6; for each forge, 6; for each cart, 2; for each sling-cart, large, 2; spare horses, one-tenth. Total, about 1900 horses.

Siemens-Martin Steel. See **ORDNANCE, METALS FOR, STEEL.**

Siena, or Sienna. A city of Central Italy, about 30 miles southeast from Florence. In the Middle Ages, Siena became one of the powerful city republics of Italy. It embraced the Ghibelline cause, and in conjunction with the forces of Pisa, defeated the Tuscan Guelphs, in the memorable battle of Monte Aperto (1206). Through intestine quarrels it was subjugated by the emperor Charles V., and given to his son in 1555, who ceded it to Cosmo of Tuscany, 1557. It was incorporated with France, 1808-14.

Sierra Leone. A district of Western Africa, situated on the Atlantic. The British settlement of Sierra Leone was established in 1787, when 400 negroes, with 60 wives, mostly women of bad character, were removed to it from London. The settlement was attacked by the French in September, 1794, and by the natives in February, 1802.

Sight. A small piece of brass or iron fixed to a cannon or a musket, to serve as a point of direction, and to assist the eye in aiming the piece.

Sight. To give the proper elevation and direction to by means of a sight; as, to sight a rifle or cannon. *To take sight*, to take aim; to look for the purpose of directing a piece of artillery, or the like.

Sight, Angle of. See **POINTING.**

Sight, Breech-. See **BREECH-SIGHT.**

Sight, Buckhorn-. A form of rear-sight much used in sporting rifles, which takes its name from the curved form of the notch used. This form of notch is now attached to the Springfield rifle in use by U. S. troops.

Sight, Coarse. An aim of a piece in which a considerable portion of the front-sight covers the object.

Sight, Elevating. The rear-sight of a small-arm, arranged to give varying heights of sight for different ranges. There are a variety of forms. The *leaf-sight* has a number of hinged leaves of different lengths. The one now used in the U. S. army has one hinged leaf. Up to 500 yards, the elevation is given by moving the sighting-piece up a curved incline. Above 500 yards, the leaf is turned up to the perpendicular.

Sight, Fine. An aim in which only the summit of the front-sight is used to get the line of sight.

Sight, Front-. The sight nearest the muzzle of a cannon or small-arm. In military arms, it is set on a short projection which is used also as the bayonet-stud. In cannon of old model, using the *tangent scale*, or pendulum hausse, the height of the front-sight is made equal to the dispart, making the *natural line of sight* parallel to the axis of the piece. See **DISPART.**

Sight, Line of. See **POINTING.**

Sight, Peep-. A form of rear-sight for small-arms in which the marksman looks through a small hole.

Sight, Plane of. See **POINTING.**

Sight, Quarter-. The quarter-sights of a cannon are divisions marked on the upper quarters of the base-ring, commencing where it would be intersected by a plane parallel to the axis of the piece, and tangent to the upper surface of the trunnions; used for giving elevations up to three degrees, and especially for pointing at a less elevation than the natural angle of sight. Now obsolete.

Sight, Rear-. The sight nearest the breech of a cannon or small-arm. The term is specially applied to small-arms.

Sight, Telescopic. An apparatus for

sighting a cannon or small-arm, consisting of a telescope so mounted as to give varying angles of sight; used especially for long ranges. Rifles with such an attachment are sometimes called telescopic rifles.

Sight, Trunnion. A front-sight fixed on or near the trunnions of a gun.

Sign. An indication or token. In astronomy, one of the twelve divisions of the zodiac.

Sign. To affix a signature; to subscribe.

Sign Language. A pantomimic system of communicating ideas, extensively used by North American Indians. The range of its use is not exactly known, but it is common among all the tribes of the plains and many of those beyond the Rocky Mountains. It is in one sense the court language of the Indians, being the only means of communication between tribes not speaking a common dialect. According to Gen. Marcy, it is accurately used and perfectly understood by all the Indians from the Gila to the Columbia. The same author tells a remarkable story, which seems to show that the system is very nearly, if not exactly, the same as that used in teaching mutes in deaf and dumb asylums.

Signal. Any sign made for marching, fighting, etc. Signals are likewise given by the drum, bugle, and trumpet, during the exercise of a battalion. See SIGNAL SERVICE.

Signal Code. See SIGNALING.

Signal Equipments. See EQUIPMENTS.

Signal Service. In the U. S. army there is one chief signal-officer of the army, with the rank, pay, and emoluments of a brigadier-general, and 400 enlisted men. The chief signal-officer is assisted in his duties by commissioned officers detailed from the line for that purpose. In war times the Signal Service of the U. S. army is equipped to maintain communications by telegraph, signals, etc., between different sections of an army or armies, or between land and sea forces. The enlisted men are thoroughly drilled in the art of field telegraphy. In peace times the Signal Service has a corps of observers stationed in large towns, and important commercial centres, to give timely warning of the approach of storms, rise of rivers, and all other important weather news for the guidance of merchants and others.

Signaling. Is of remote origin. A rude code of signals addressed to the eye is common among the savage races of the present day, and doubtless existed from the earliest times among the historical races. The Indians of the great plains of North America avail themselves for night-signals of fires lighted on elevated points, and of dense clouds of smoke made by suddenly heaping green brush upon a fire for day-signals. Gen. Marcy, in his "Army Life on the Border," shows that similar signals can be used in this region with great advantage by troops engaged in Indian campaigning. Messages exchanged in this way must be preconcerted.

This method of signaling dates from a remote antiquity. Alphabetical signaling—a system in which a written language is conveyed by means of its elements—is first described by Polybius, about 260 B.C., and seems to have been devised, or at least greatly improved by him. He formed a code by arranging the letters of the Greek alphabet in several columns. A given letter was represented by a number of lanterns or torches or other signals, which gave the number of the column, and a second set of signals giving the number of the letter in the column. Capt. John Smith, of Virginia fame, is said to have used the system of Polybius during the siege of Vienna. Alphabetical signaling thus early adopted remained without improvement, and too cumbersome for general application till recent times. *Message signaling* by torches, flags, and rockets has been generally used, especially at sea, where it has a wide application both in war and commerce. The signals usually represented numbers, which were referred to printed codes. The invention of the magnetic telegraph led to the Morse alphabet, which crystallized the hitherto vague idea of representing letters by the combination and arrangement of a few simple elements. In the *general service code* of the United States, there are used two elements. These can readily be represented by sounds, motions, numbers, colors, etc. The ordinary method of signaling is by waving a flag by day and a torch at night. See also TELEGRAPH, FIELD.

Sikh Wars. Two brief but desperate contests waged between the British power in India and the Sikhs in 1845-46, 1848-49, which resulted in the destruction of the latter as an independent nation. The first had its origin in the dissensions which convulsed the Sikh country after the death of Runjeet Singh, and which necessitated the exercise of wary regard on the part of the Calcutta authorities. At length an army of Sikhs, flushed with their triumph over all lawful authority in their own country, crossed the Sutlej, and extended their ravages over British territory; but their advanced guard was met by Sir Henry Hardinge, the governor-general, at the head of four regiments of infantry and one of dragoons, and routed at Mudki with heavy loss. Three days after, the main body, which had in the mean time crossed the river and intrenched itself at Feroze-Shah, was attacked by a larger force of British under Gough and Hardinge, and after a bloody conflict, which lasted two days, also routed. Still undismayed by these reverses, they again intrenched themselves at Sobraon; but a fresh body which had just crossed the Sutlej at Aliwal 19,000 strong with 68 pieces of cannon, was wholly routed and driven across the river by Sir Harry Smith, at the head of 7000 men, with 82 guns; and their main body was soon after similarly dispersed at Sobraon (which see). The British then crossed the river, took La-

hore, and restored the authority of the young Maharajah from whom they took the territory between the Beas and the Sutlej; the treaty confirming this settlement being made at Lahore, March 9, 1846. But the internal disturbances in the kingdom of Lahore soon became as active as before, and induced the Maharajah's prime minister to put the country under the Company's protection; and a residency with a guard of regular troops was then established in the capital. On April 20, 1848, two British officers were murdered by a Sikh chief, the dewan of Moolraj of Multan; and as it was found to be but a premonitory symptom of a general outbreak, a small force of British under Lieut. Edwardes, aided by a body of Sikhs, under the rajah of Bhawalpur, gallantly attacked the army of Moolraj, which, after a desperate conflict of nine hours, they defeated on June 18, and, both sides in the mean time having received reinforcements, again on July 1; Multan was then laid siege to, but the defection of 5000 auxiliary Sikhs under Shere Singh (the son of the Sirdar Chuttur Singh, the governor of Hazara, who had been for some time in revolt, and had driven the British from his district), compelled the British to retreat. For some time, the British authorities in the Punjab were hampered by a want of military force, and though the Maharajah and much of his army still opposed the Sikh rebels, little reliance could be placed upon most of it. Shere Singh now succeeded in raising his army to 40,000, but was defeated by Lord Gough at Ramnuggur (November 22). The inconsiderate haste of Gough at Chillianwalla, January 13, nearly lost him that great battle, which was saved only by the extreme valor of his soldiers; but amends for this fault were made at Gujrat, where the power of Shere Singh and his allies was completely broken. Meanwhile, the fortress of Multan had, after a protracted bombardment, been captured, and the Company, seeing no other mode of protecting their territories from annoyance by these warlike fanatics, annexed the Punjab, March 29, 1849, and thus terminated the existence of the Sikhs as an independent nation.

Sikhs. The term Sikh, a corruption of the Sanscrit *s'ishya*, signifying "disciple," is applied to a community of which the Punjab, in Northern India, constitutes, substantially, the confines. Less commonly, even among themselves, the members of this community are also known as Sinhs (vulgarly Singhs), that is, "Lions," a title given them by Govind, the last and most influential of their hierarchs. Every name of a Sikh male now terminates with the word Sinh. Originally a body of mere religionists, the Sikhs, from the energy which they developed under repression, and the inducements which they offered as proselytizers, grew by degrees, in strength and numbers, and ended in a formidable nationality. Their originator, Nanak, was born

in 1469, in the vicinity of Lahore, and died in 1539, not far from the place of his nativity.

Silence. To cause to cease firing by a vigorous cannonade; as, to silence the batteries of an enemy.

Silesia. A province of the kingdom of Prussia, included in the limits of the new German empire, lies south of the provinces of Brandenburg and Posen. Formerly a province of Poland; was invaded by John of Bohemia in 1325; ceded to him, 1355. In 1740, Frederick II. of Prussia, taking advantage of the helpless condition of Maria Theresa of Austria, laid claims to certain portions of Silesia; and without declaring war, marched into and took possession of the province, maintaining his hold despite the utmost efforts of Austria in 1740-1742, and 1744-1745, called the *first* and *second* Silesian wars. After the *third* Silesian war, better known as the *Seven Years' War* (which see), it was finally ceded (1763) to Prussia. It was overrun by the French in 1807.

Silistria. A strongly fortified town of Bulgaria, in Turkey in Europe, on the right bank of the Danube. Here in 971, the Byzantine emperor, John Zimisces, routed the Russians under Sviatoslav. It was taken by the Russians, June 30, 1829, and held some years by them as a pledge for the payment of a large sum of money by the Porte, but was eventually returned. In 1854 it was again besieged by the Russians (80,000 strong), under Prince Paskewitch, and many assaults were made. The Russian general was compelled to return in consequence of a dangerous contusion. On June 2, Mussa Pasha, the brave and skillful commander of the garrison, was killed. On June 9, the Russians stormed two forts, which were retaken. A grand assault took place on June 13, under Prince Gortschakoff and Gen. Schilders, which was vigorously repelled. On the 15th, the garrison assumed the offensive, crossed the river, defeated the Russians, and destroyed the siege-works. The siege was thus raised, and the Russians commenced their retreat as Omar Pasha was drawing near. The garrison was ably assisted by two British officers, Capt. Butler and Lieut. Nasmyth, the former of whom, after being wounded, died of exhaustion. They were highly praised by Omar Pasha and Lord Hardinge, and Lieut. Nasmyth made a major.

Sill. In fortification, the inner edge of an embrasure.

Silladar Horse. Indian irregular cavalry, raised and maintained on the principle of every man furnishing and maintaining his own horse, arms, equipments, etc., in return for his pay.

Sillon. In fortification, a work raised in the middle of a ditch, to defend it when it is too wide. It has no particular form, and is sometimes made with little bastions, half-moons, and redans, which are lower than

the works of the place, but higher than the covert way. It is more frequently called an *envelope*.

Silures. A powerful people in Britain, inhabiting South Wales, who long offered a formidable resistance to the Romans, and were the only people in the island who at a later time maintained their independence against the Saxons.

Silver Stick. Is the title given to a field-officer of the Life Guards, when on duty at the palace. The *silver stick* is in waiting for a week, during which period all reports are made through him to the *gold stick* (which see), and orders from the *gold stick* pass through to the brigade. In the absence of the *gold stick* on levees, and drawing-room days, he goes to the royal closet for the parole.

Simancas. A town of Spain, province of Valladolid. Near it Ramirez II. of Leon and Fernando of Castile gained a victory over Abderahman, the Moorish king of Cordova, August 6, 938. The archives of Castile are kept in the fortress of this place, and many valuable documents and records were burnt by the French troops quartered in the town in 1809.

Simonoseki. A town of Japan, at the southwestern extremity of the island of Nipon, and at the entrance of the island sea Suonada. In 1863 three vessels belonging to the American, Dutch, and French governments were fired into from batteries on the shore of Simonoseki Strait; this assault was subsequently returned by French and American war-vessels. In 1864 a combined fleet of Great Britain, France, Holland, and the U. S. men-of-war bombarded and destroyed Simonoseki. The Japanese government had to pay an indemnity of \$3,000,000.

Simulation. The vice of counterfeiting illness or defect, for the purpose of being invalided.

Sinalunga. A town of Central Italy, in the province of Sienna. Here Garibaldi was arrested in 1867, whilst attempting to cross into the Papal territory to take command of the volunteers who intended to march upon Rome.

Sinde, or Scinde. (Called also *Sindh*, or *Sindia*, and *Sinday*, from *sindhoo*, or *sindhu*, "a collection of waters.") An extensive territory of British India, included in the presidency of Bombay, comprising the lower course and delta of the Indus. It was traversed by the Greeks under Alexander, about 326 B.C.; conquered by the Persian Mohammedans in the 8th century; tributary to the Ghaznevide dynasty in the 11th century; conquered by Nadir Shah, 1789; reverted to the empire of Delhi after his death, 1747. After various changes of rulers, *Sinde* was conquered by the English. Sir Charles James Napier, the British envoy, at the head of a considerable military force, marched against the enemy, totally routed them at Meeanee (February 17, 1843), and by defeating the ameers of Mirpur, at Dubba, near

Hyderabad (March 24), completed the subjugation of *Sinde*. For two years afterwards, Napier was actively employed in reducing the marauding tribes of the west, who pillaged the province; and so successful was the "*Sheitanka bhai*" (Devil's Brother), as the robber tribes named him, that they were completely rooted out of their fastnesses, and most of them transported to distant regions.

Sine Die ("without day"). When the court or other body rise at the end of a session or term they adjourn *sine die*. In law this does not preclude further proceedings by the same court.

Single Combat. A contest in which no more than two are engaged.

Single-stick. A cudgel used in fencing or fighting. Also, a game at cudgels, in which he who first brings blood from his adversary's head is pronounced victor.

Sinister. In heraldry, the left-hand side of a shield. As shields are supposed to be carried in front of the person, the sinister side is that which covers the bearer's left side, and therefore, lies to the spectator's right. See POINTS OF THE ESCUTCHEON.

Sinopé (Turk. *Sinub*). A town of Asiatic Turkey, province of Anatolia, on the southern side of a little promontory running eastward into the Black Sea, 80 miles northwest of Samsun. Ancient Sinopé was the most important of all the Greek colonies on the shores of the Euxine. Having been destroyed in the invasion of Asia by the Cimmerians, it was restored by a new colony from Miletus, 682 B.C. It remained an independent state till it was taken by Pharnaces I., king of Pontus. After an obstinate resistance to the Romans under Lucullus, it was taken and plundered, and proclaimed a free city. The bay of Sinopé, which affords the finest anchorage for ships along the whole northern coast of Asiatic Turkey, was the scene of a bloody naval engagement, or rather massacre, November 30, 1853, when a Turkish squadron of 18 ships was suddenly attacked and destroyed (except one vessel which conveyed the tidings to Constantinople) by a Russian fleet of 6 sail of the line, 2 sailing-vessels, and 3 steamers; 4000 lives were lost by fire or drowning, and Osman Pasha, the Turkish admiral, died at Sebastopol of his wounds. In consequence of this event, the Anglo-French fleet entered the Black Sea, January 3, 1854.

Sinople. In heraldry, the same as *Vert* (which see).

Sinuessa. An ancient town of Italy, on the shore of the Mediterranean, near the confines of Latium and Campania. It was colonized by the Romans in 296 B.C. It suffered much during the invasion of Hannibal, who, in 217, carried his devastations up to the very gates.

Sioux Indians. See DAKOTA INDIANS.

Sir. The title of a knight or baronet, which, for distinction's sake, is always prefixed to the knight's or baronet's Christian

name, either in speaking or in writing to him.

Siraceni, Siraci, or Siraces. A powerful people of Sarmatia Asiatica, dwelt in the district of Siracene, east of Palus Mæotis, as far as the river Rha (now Volga). The Romans were engaged in a war with them in 50.

Sirmium (now Mitroviz). An important city in Pannonia Inferior, was situated on the left bank of the Savus. It was founded by the Taurisci, and under the Romans became the capital of Pannonia, and the headquarters of all their operations in their wars against the Dacians and the neighboring barbarians. It contained a large manufactory of arms, a spacious forum, an imperial palace, etc. It was the residence of the admiral of the first Flavian fleet on the Danube, and the birthplace of the emperor Probus.

Siscia. An important town in Pannonia Superior, situated upon an island formed by the rivers Savus Colapis and Odra. It was a strongly-fortified place, and was conquered by Tiberius in the reign of Augustus, from which time it became the most important town in all Pannonia.

Sissopoli, or Sizoboli. A town of Turkey in Europe, 80 miles northeast from Adrianople. It was taken by the Russians in 1829.

Sistova, or Schistab, called also Shtab. A town of Turkey in Europe, in Bulgaria, on the right bank of the Danube, 24 miles east-southeast from Nicopolis. A treaty of peace ("peace of Sistova") was signed here between Austria and Turkey in 1791.

Sit. In a military sense, to take a stationary position; as, *to sit before a fortification*, to lie encamped for the purpose of besieging it.

Sitka. Called by the Russians New Archangel, is the most important settlement in Alaska. It is situated on the west side of Baranoff Island, in lat. 57° 3'. The population is mainly composed of Indians and Russian half-breeds. A census taken in 1875 made the total number, excluding Indians, 502. For many years Sitka was the headquarters of the Russian American Company. Upon the transfer of the Territory, in 1867, to the United States, Sitka became the headquarters of the military department of Alaska. It remained an army post till 1877, when the garrison was withdrawn. The inhabitants are at present protected from the Indians by a naval vessel.

Sixain. In the Middle Ages, was an order of battle, wherein six battalions being ranged in one line, the second and fifth were made to advance, to form the vanguard; the first and sixth to retire, to form the rear-guard; the third and fourth remaining on the spot, to form the corps or body of the battle.

Six-shooter. A pistol with six barrels, or capable of firing six shots in quick succession; especially a six-barreled or six-chambered revolver.

Size, To. In a military sense, to take the height of men for the purpose of placing them in military array, and of rendering their relative statures more effective.

Skalitz. A small town of Austria, in the northwest of Hungary, near the borders of Moravia, on the left bank of the March. It was stormed by the Prussian general Steinmetz, June 28, 1866; whereby the junction of the divisions of the Prussians was greatly facilitated.

Skean, Skeen, or Skeine. A Celtic word which signifies a knife. It was a weapon in the shape of a small sword or knife, which was worn by the Irish in ancient times.

Skedaddle. To betake one's self to flight; to run away with precipitation, as if in a panic; to withdraw, as an army, or part of an army, from the presence of an enemy, especially in a hasty or secret manner.

Skeleton. A word applied to regiments that have become reduced in their number of men.

Sketch, Military. The delineation of a small portion of ground for military purposes. The scale is generally larger than that of a map.

Skid. In military language, is any timber which is used as a base to keep one object from resting on another. Thus, a row of cannon in store will be kept from the ground by skids. The term is also applied to the drag which is put on the wheels of carriages in going up hills, to prevent rolling backwards.

Skierniwece. A town of Russia, situated on the Bzura, 88 miles southwest from Warsaw. The French were defeated here, in 1809, by the Russians.

Skinner. A name assumed by a predatory band in the Revolutionary war, who, professing allegiance to the American cause, but influenced by a desire to plunder, roamed over the "neutral ground" lying between the hostile armies, robbing those who refused to take the oath of fidelity.

Skipton. A town of England in the West Riding of Yorkshire, 88 miles west of York. The old castle of Skipton was founded in the time of William the Conqueror; it was a place of great strength in the 17th century, and held out for three years against the Parliamentary forces. In 1649 it was dismantled, but subsequently rebuilt by the Countess of Pembroke.

Skirmish. A slight fight in war; a light combat between detachments from armies which are yet at a considerable distance from each other, or between detached and small parties.

Skirmish. To fight slightly or in small parties; to engage in a skirmish; to act as skirmishers.

Skirmisher. One who skirmishes; one of such troops as are sent forward in advance, or move deployed in loose order on the flanks of a marching column, to discover and intercept hostile forces.

Skiver. A dirk to stab with.

Skottefer. Formerly a name applied to an archer.

Sky-rocket. See PYROTECHNY.

Slash. A cut; a wound; also, a cut in cloth. It was formerly used to express the pieces of tape or worsted lace which were placed upon the arms of non-commissioned officers, in order to distinguish them from privates.

Slash. To strike violently and at random with an edged instrument; to lay about one indiscriminately with blows.

Slashed. Cut in stripes or lines. Hence, slashed sleeves and pockets, which are peculiar to the British cavalry, when the officers or men wear long coats.

Slaughter. The extensive and unnecessary destruction of human life; carnage. Also, to visit with great destruction of life; to kill; to slay in battle.

Slavonia, or Sclavonia (called by the native *Slavonska*). A territory or province of the Austrian empire, formerly incorporated with Hungary, but now forming part of the kingdom of Croatia and Slavonia. The country anciently formed part of the province of Pannonia. During the barbarian migrations, the land was overrun, now by one and now by another tribe, and at length remained in the possession of the Avars. These, however, were conquered about the end of the 8th century by Charlemagne, who settled in their place a tribe of Slavonians from Dalmatia. When, in the 10th century, the Hungarians conquered Pannonia, they also made themselves masters of the whole of Slavonia, except Syrmia, which still remained subject to the Eastern emperors. It was, however, the object of contention, and the scene of bloody conflicts between the Greeks and the Hungarians, until, after various vicissitudes, it was finally ceded to the latter in 1165. From 1526, when it was conquered by the Turks, Slavonia remained in their possession till it was restored to Hungary by the peace of Carlowitz in 1699. In 1734 its size was diminished by the formation of the Military Frontier, and in 1848 it was separated from Hungary.

Slavonians, or Slaves (native name *Slowene*, or *Slowane*). The general name of a group of nations belonging to the Aryan family, whose settlements extend from the Elbe to Kamtschatka, and from the Frozen Sea to Ragusa on the Adriatic, the whole of Eastern Europe being almost exclusively occupied by them. The original names of the Slavic tribes seem to have been Winds, or Wends (*Venedi*), and Serbs. The latter of these names is spoken of by Procopius as the ancient name common to the whole Slavic stock. The Slavonians proper are a handsome, tall, and slender race.

Sleepers. Small joists of timber, which form the foundation for the platform of a battery, and upon which the boards for the flooring are laid. Also, the undermost timbers of a gun or mortar.

Sleets. The parts of a mortar extending

from the chamber to the trunnions, to strengthen that part.

Sleeves, Gunner's. See IMPLEMENTS.

Sliding-rings. See ORDNANCE, CARRIAGES FOR, NOMENCLATURE OF ARTILLERY CARRIAGE.

Sligo. A maritime county in the northwest of Ireland, and the province of Connaught. It formed part of the kingdom of Connaught previously to the arrival of the English, in the reign of Henry II. Subsequently it came into the possession of one of the family of the O'Connors, kings of Connaught, who was called O'Connor Sligo. After a protracted struggle between the natives and the English, it fell into the hands of the De Burgos, who either by force or treaties had made themselves masters of the greater part of the ancient kingdom of Connaught. It became the theatre of several conflicts in the war against O'Neil, chieftain of Tyrone, in the latter part of Elizabeth's reign. The most remarkable of these was that with Sir Conyers Clifford, who in attempting to pass into the country from Roscommon with a body of from 1500 to 2000 men, in order to relieve Belleek, was attacked in a defile of the Curlew Mountains by O'Roark, chieftain of Breffney, was himself killed and his troops were driven back with considerable loss. During the civil wars of 1641, the Irish kept possession of the open country until nearly its close, when they were reduced to submission by the Parliamentary forces under Ireton. In the subsequent war of 1688 this country was held by the forces of King James for some time, but ultimately yielded to the victorious arms of William III. The French force which landed at Killalla under Gen. Humbert in 1798, had a severe skirmish at Coloony with the Limerick militia, commanded by Col. Vereker, afterwards Viscount Gort, which ended in the retreat of the latter.

Sligo. The chief town of the above county, and a seaport, situated on the mouth of the river Garroogue. In 1641, it was taken without opposition, by the Parliamentarians, under Sir Charles Coote, who was afterwards attacked by a force collected by the Roman Catholic archbishop of Tuam, which retreated in consequence of an alarm being spread that a large force was approaching to relieve the town. When retiring they were attacked by the Parliamentary forces, the archbishop killed, and on his person was found the important document exposing the secret communications which took place between Charles I. and the Irish Catholics. Coote subsequently evacuated the town, which thence continued in possession of the royalists till the termination of the war. In 1688 it was taken for King William by the Enniskilleners, who, in turn, were driven out by Gen. Sarsfield; but the place ultimately surrendered to the Earl of Granard.

Sling. A weapon much in use before the introduction of fire-arms, consisted of a piece of leather, with a round hole in the middle,

and two cords of about a yard in length. A round pebble being hung in the leather by cords, the latter were held firmly in the right hand, and swung rapidly round. When the stone had attained great speed, one string was disengaged, on which the stone flew off at a tangent, its initial velocity being the same as it had at the last moment of revolution. This velocity gives far greater range and force than could be imparted in mere throwing. The men who used this weapon were called *slingers*.

Sling. A leather strap attached to a musket, serving to support it across the soldier's back, as occasion may require.

Sling-cart. See HAND SLING-CART.

Slingers. See SLING.

Slope Arms. A word of command in the British service, for placing the musket upon the shoulder with the butt advanced. In marches, soldiers are almost invariably permitted to slope arms.

Slope, Interior. See INTERIOR.SLOPE.

Slopes. The approaches to the crest of heights are by slopes, which may be either gentle or steep. When these slopes are gentle, the fire from the crest can be made an effective one by reason of its "grazing action." Especially will it be so with artillery fire when properly directed. When slopes are quite steep, the fire will be a plunging one, and will be apt to pass over the heads of the attacking troops. Especially will this be the case with the fire of artillery.

Sloping Swords. In the British service, is a position of the sword among cavalry, when the back of the blade rests on the hollow of the right shoulder, the hilt advanced.

Slow Time. The same as common time, by which troops on foot march at the rate of ninety steps per minute.

Slow-match. See LABORATORY STORES.

Slugs. Cylindrical or cubical pieces of metal, discharged from a gun.

Slur-bow. A species of cross-bow formerly used for discharging fire and arrows.

Smalcald. See SCHMALKALD, LEAGUE OF.

Small-arms. Are portable fire-arms known as muskets, rifles, carbines, pistols, etc., and were first invented about the middle of the 14th century. At first they consisted simply of a tube of iron or copper, fired from a stand or support. They were loaded with leaden balls, and were touched off by a lighted match held in the hand. They weighed from 25 to 75 pounds, and consequently two men were required to serve them. The difficulty of loading these weapons, and the uncertainty of their effects, as regards range and accuracy, prevented them from coming rapidly into use, and the cross-bow was for a long time retained as the principal projectile weapon for infantry. The difficulty of aiming hand-cannon, arising from their great weight, was in a measure overcome by making them shorter, and sup-

porting them on a tripod, by means of trunnions which rested on forks. This arm was called an *arquebuse* (which see). The next improvement in the arquebuse was to make it lighter, and inclose it in a piece of wood called the *stock*, the butt of which was pressed against the left shoulder, while the right hand applied the match to the vent. It was still very heavy, and in aiming, the muzzle rested in the crotch of a fork placed in the ground. To give steadiness to the aim while applying the match to the priming, a species of lock was next devised, which consisted of a lever holding at its extremity a lighted match. In firing, the lever was pressed down with the finger until the lighted end of the match touched the priming. This apparatus, known as the *serpentine*, continued in use until it was replaced by the *wheel-lock*, which was invented in Nuremberg, in 1617. (See WHEEL-LOCK.) The *petronel* was a wheel-lock arquebuse of larger caliber and lighter weight than its predecessors. See PETRONEL.

Musket.—The musket was first introduced by the Spaniards, under Charles V. The original caliber of the musket was such that 8 round bullets weighed a pound; the piece was, consequently, so heavy that it was necessary to fire it from a forked rest inserted in the ground. The size of the bore was finally reduced to 18 bullets to the pound; and from this arm was derived the late smooth-bored rifle.

Rifle.—It is generally stated that the rifle was invented by Gaspard Zoller, of Vienna, and that it first made its appearance at a target-practice at Leipsic, in 1498. The first rifle-grooves were made parallel to the axis of the bore, for the purpose of diminishing the friction of loading forced or tightly-fitting bullets. It was accidentally discovered, however, that spiral grooves gave greater accuracy to the flight of the projectile, but the science of the day was unable to assign a reason for this superiority, and the form, number, and twist of the grooves depended on the caprice of individual gunmakers. About 1600, the rifle began to be used as a military weapon for firing spherical bullets. In 1729, it was found that good results could be attained by using oblong projectiles of elliptical form. The great difficulty, however, of loading the rifle, which was ordinarily accomplished by the blows of a mallet on a stout iron ramrod, prevented it from being generally used in regular warfare. The improvements which have been made of late years have entirely overcome this difficulty, and rifles have now superseded the smooth-bored arms.

Muzzle-loading Guns.—The following are among the most prominent muzzle-loading guns in use prior to 1860:

The Lancaster Elliptic Rifle.—So called, although the elliptical rifle is very old. The bore in this rifle is slightly oblate; the twist found, by experience, to be most advantageous is one turn in 52 inches, the approved

diameter of the bore .498 inch, the length of the barrel being 32 inches. An eccentricity of .01 inch in half an inch is found sufficient to make the bullet spin on its axis to the extreme verge of its flight. The length of the bullet found to answer best with these rifles is $2\frac{1}{2}$ diameters in length, with a windage of four- or five-thousandths of an inch.

Nuthall's Rifle.—In the ordinary mode of grooving rifles, sharp angles are left between the groove and "land" (those parts of the smooth-bore left in their original state after the process of grooving has been completed). These create great friction with the projectile, both in loading and discharging. Maj. Nuthall removes these objections by rounding off the "lands" into the grooves, that is, making them a series of convex and concave curves, the bore assuming a beautiful appearance to the eye, for the smoothness and evenness with which the lands and grooves blend into each other.

Enfield Rifle.—This rifle has three grooves, taking one complete turn in 78 inches, firing a bullet resembling the Minié, except that a wooden cup was substituted for one of iron. Its diameter is .577 of an inch, its bullet weighs 580 grains, and ranges with great accuracy for 800 yards, and fairly up to 1100. There are also Gen. Boileau's rifle, and some others which our space will not admit of our noticing. The extraordinary efficacy of the breech-loading principles, especially in combination, have, however, only been very prominent during the wars of the last few years, and notably in the Prussian campaign of 1864 against Denmark, and of 1866 against Austria. The successes of the Prussian arms were attributed in no small degree to the rapidity with which their troops could fire as compared with the enemy. They had in greater or less numbers borne these same rifles since 1835, but these were the first opportunities of using them in warfare. To all other powers, whose men still carried muzzle-loading rifles, and who had debated, without practical result, for years past the question of armament with breech-loaders, soldiers thus armed appeared irresistible. From July, 1866, to the present moment, the hammer and the anvil have been busy throughout the civilized world in making the weapons of death yet more deadly. Scarcely two countries seem to have adopted the same plan: each nation has elaborated a system from among its own inventors. Those possessing no great reserve of rifles have prepared new arms, but the majority of governments have been content, in the first instance, to convert their existing stock into needle-firing breech-loaders of as good a construction as circumstances would permit. The advantage of breech-loading is obvious: to be able to insert the charge at the head of the barrel instead of at its mouth, is to save time and avoid exposure to hostile fire during the operation of loading and ramming home, which of necessity involves considerable outstretching of the limbs. The

great condition of success is, that the bullet shall be propelled with equal force and with equal safety to the rifleman, as from the muzzle-loader. When a charge is ignited the constituents of the gunpowder, assuming a gaseous condition under the heat engendered, expand into a volume of light gas many times greater in bulk than the powder before occupied. On the amount of this expansion, and its sudden action on the projectile, the force of the shot depends. Any joint in the breech-piece through which a portion of this gas can escape, without having imparted its thrust to the ball, tends, therefore, to lessen the range and penetration; while the shock of the explosion falling more severely on this than on any other part of the barrel, tends yet more to dislocate the breech-piece and diminish the closeness of the joint's fit. In weapons which do not call for a long range, as revolvers and pistols, a perceptible interval is left between the chamber and barrel, through which much gas escapes; but in rifles, which have range and penetration as principal objects, there is *prima facie* ground for preferring a muzzle-loader. The gas, however, is far from pure as generated in the barrel, for much water is produced and held in suspension, while there is also a solid residuum consisting of unburned materials of the powder. In the muzzle-loader, these clog (or, technically, foul) the barrel, filling the grooves and rendering the ramming home of succeeding charges more and more difficult. The effect is, that a solid mass of unburned matter is gradually forced by ramming into the head of the barrel, destroying the accuracy and usefulness of the weapon. In the breech-loader, this solid deposit must be provided against both ways. The backward throw on firing (for, of course, the charge explodes with equal power in every direction) tends to force it into the mechanism of the joints, preventing their proper fit, and continually augmenting the escape of gas. On the other hand, the deposit is prevented from accumulating in the barrel by the fact that succeeding charges are inserted behind it, and, by their explosion, force the solid matters out at the muzzle. Thus, in the matter of fouling, if the gases can be prevented from blocking up the breech-apparatus, the breech-loader has a great advantage over the muzzle-loader. This protection of the breech-apparatus is the problem which inventors have had to solve. The following are the most notable among breech-loading arms:

The American *Springfield*, model of 1878. The barrel is of "low steel," caliber .45 inch, rifled with three concentric grooves of equal widths with the lands, and of the uniform depth of .005 of an inch, and uniform twist of one complete turn in 22 inches. The *lock-plate* is 0.175 inch thick, and let in flush. The exterior metal-work is browned. An open swivel is attached to the upper band, for stacking arms, instead of locking bayonets, as heretofore; also a "trowel bayonet"

and "intrenching tool." Length of rifle-barrel including receiver, 36 inches; carbine, 25.4 inches. Length of rifle-bayonet, 18 inches; crook of stock, $2\frac{1}{4}$ inches, and distance from butt to trigger, $18\frac{1}{4}$ inches. Total length of rifle, without bayonet, 51.9; of carbine, 41.3 inches; weight of rifle without bayonet, 8.88 pounds; of carbine, 6.87 pounds. Trigger adjusted to pull at 6 to 8 pounds.

Remington.—This is a magazine-gun, and belongs to that system in which a fixed chamber is closed by a bolt, by direct action, and in which the lock is concealed. The magazine is in the tip-stock, and carries 8 cartridges, which are brought into the chamber by the action of the trigger; the mechanism is so arranged that no more than one cartridge can enter the chamber at the same time. The magazine is loaded from below, and in any position of the bolt.

Sharps.—See *SHARPS RIFLE*.

Spencer.—A magazine-gun, holding 7 cartridges which are brought one by one into the chamber by a movement of the trigger-guard as a lever, which at the same time throws out the shell of the exploded cartridge. A new magazine can be inserted whenever the cartridges have been exhausted, or the magazine may be shut off and the rifle used as a single breech-loader.

Winchester.—Same pattern as the *Spencer*.

Snider Rifle.—So called from its inventor, the essential features of which are that the breech-block revolves around an axis on the right of and parallel to the axis of the bore, and the firing-pin passes obliquely from the nose of the hammer, through the breech-block, to the centre of the base of the cartridge. This was the first form of breech-loaders adopted by the British government, which in 1866 directed that the old Enfield muzzle-loaders should be altered to breech-loaders upon this system.

Martini-Henry.—Adopted by the British government, has a breech-loading apparatus on the Martini system united to a barrel rifled on the system of Henry, a gunmaker of Scotland. Martini, a Swiss, derived his system of breech-loading from the Peabody system of the United States by dispensing with the independent outside lock and substituting therefor a spiral-spring firing-bolt or striker, inclosed in the breech-block; the number of grooves is seven; in shape they are flat at the bottom; the lands are narrow, having the appearance of sharp ribs, which are designed to take a firm hold of the bullet. It is understood that these grooves are made somewhat deeper at the breech than at the muzzle. The twist is one turn in 22 inches. There is a brass collar around the head of the ramrod to prevent injury to the bore in wiping out. The weight of the rifle is $8\frac{1}{2}$ pounds; of bayonet $1\frac{1}{4}$ ounces. The weight of rifle with bayonet attached 9 pounds 11 ounces.

Mauser Rifle.—This rifle is used in Prus-

sia, and is a modification of the Chassépot system, by which it is adapted to the use of the metallic gas-check cartridge. It was invented in 1871. The mechanism of this gun is much simpler than the needle-gun, and has a longer range.

Chassépot Rifle.—The Chassépot rifle is used in France, and was introduced shortly after the Austro-Prussian war of 1866. In its principal features it resembled the Prussian needle-gun, inasmuch as the breech was closed with a sliding-bolt, and it fired a self-primed paper-case cartridge, which was ignited by a needle impelled by a spiral spring. Unlike the needle-gun, however, it was provided with a gas-check, which was of the form of a thick india-rubber disk or packing, attached to the end of the breech-bolt, and it possessed the modern improvements of reduced caliber and rapid twist of the rifle-grooves for obtaining great range and accuracy of fire. The Chassépot was the principal arm used by the French army during the German war. Since that time efforts have been made to adapt it to fire the modern metallic-case cartridge. The plan of alteration to this end adopted by the French authorities is that submitted by Capt. Gras of the French artillery committee. The length of the bore, including the chamber, is 32.28 inches; the length of the complete arm, without sabre-bayonet, is 50.8 inches; and with the bayonet it is about 72.0 inches. The weight with the bayonet is 10.3 pounds; without the bayonet, 8.9 pounds. The grooves are four in number, and of a width equal to that of the lands; the depth of the grooves is 0.0118 inch; the twist is one turn in 21.6 inches, and is from right to left instead of from left to right, according to the usual practice. The pull on the trigger is thought to disturb the aim by carrying the muzzle of the arm slightly to the right; the object of grooving the barrel to the left is to correct this disturbance by the drift which follows the direction of the twist. The initial velocity is stated to be 420 metres (about 1377 feet), and the effective range extends to 1700 yards, about one mile. The rapidity of fire is 15 times per minute. The Russian army is armed with two patterns of *Berdan* breech-loaders. One lot of 80,000, in which the breech-block swings upward and forward, was manufactured by the Colt's Patent Fire-Arms Company, Hartford, Conn., and a second lot of 80,000 on a sliding breech-bolt system made in Birmingham, England. The latter-named arm was adopted for the entire Russian army. The following are the principal dimensions: Diameter of bore (caliber), 0.42 inch; length of barrel, 30.48 inches; total length of arm without bayonet, 50.88 inches; length of arm with bayonet, 70.38 inches; number of grooves, 6; twist, one turn in 20 inches; weight of arm with bayonet, 9.75 pounds.

Vetterlin Rifle.—Is a repeating rifle used in the Swiss service, and is a Swiss invention, the peculiarity of which is the union

of a cartridge magazine with a sliding-bolt-breech system. The following are the principal dimensions: Caliber, 0.41 inch; number of grooves, 4; depth of grooves, 0.0086 inch; width of grooves, 0.0177 inch; twist of grooves, 26 inches; length of barrel, 33.14 inches; length of arm without bayonet, 51.18 inches; length of arm with bayonet, 70.08 inches; weight of arm without bayonet, 10.14 pounds; with bayonet, 11.02; weight of rifle with magazine filled, 12.12 pounds; initial velocity, 1841 feet.

Werndl Rifle.—Adopted in the Austrian service in place of the alteration of Wanzl, is the invention of Joseph Werndl, a gun manufacturer of Styria, and is applied to muskets, carbines, and pistols. The breech-block in this system vibrates around an axis parallel to and below the axis of the bore prolonged to the rear of the chamber. The barrel of the musket is made of cast steel. Its length is 33.14 inches, including the chamber, which is 2.07 inches. Its weight is 3.83 pounds. The rifle-grooves are six in number, and their depth is 0.007 inch. The lands are 0.07 inch wide, and the grooves 0.15 inch. The twist is one turn in 28.5 inches. The total length of arm, including sabre-bayonet, 78.0 inches, while its weight, including the bayonet, is about 11.5 pounds; without the bayonet the length is 50.6 inches, and the weight 9.85 pounds. The barrel, bands, and sights are browned.

Werder Rifle.—Adopted in 1869 for the Bavarian army, is the invention of J. L. Werder of Nuremberg, and is known as the Werder system. It belongs to the class of falling breech-blocks, of which the Peabody may be considered the exponent in this country. It differs, however, from this and most other guns of this class, as the breech-block is opened and closed by the hammer instead of the lever-guard, giving, as claimed, greater safety and ease of manipulation, especially when the soldier loads lying on the ground. The rifle-grooves are four in number, their depth is 0.0075, and twist is one turn in 22 inches. The diameter of the bore is 0.485; the length of the barrel, including chamber, but exclusive of breech-frame, is 85.0; the weight of the arm without bayonet, 9.75 pounds. The breech-loaders with and without the needle-arrangement are too numerous to mention, but the most notable are given above. See *MAGAZINE GUNS*, and *LYMAN'S MULTI-CHARGE GUN*.

Revolver.—In fire-arms, is a weapon which, by means of a revolving breech, or revolving barrels, can be made to fire more than once without reloading. The invention is very far from new, specimens, with even the present system of rotation, being still in existence, which were manufactured at the beginning of the 17th century. Probably the first revolver to suggest itself was one in which several barrels were mounted on an axis, and made to revolve by the action of the trigger, so that their powder-pans came successively under the action of the lock.

This principle was never entirely abandoned, and in the reign of George IV. was produced a pistol called the "Marlette," which had from 4 to 24 small barrels bored in a solid mass of metal, made to revolve as the trigger was drawn back. At close quarters, such a pistol would doubtless have been useful; but its great weight and cumbrous mechanism rendered aim extremely unsteady. Contemporaneously from the first with the revolving barrels, went the formation of a revolving chamber or breech, pierced with several cylindrical apertures to receive the charges. Being made to revolve, each motion brought a chamber into line with the one barrel, common to all, whereupon the weapon was ready for use. Numerous patents for this principle have been taken out, including one by the celebrated Marquis of Worcester in 1661. Various improvements were made, especially in the mode of causing revolution; an American patented such a weapon in the United States and England about 1818. In 1835, Col. Samuel Colt brought to a conclusion experiments of some years' standing, and patented his world-renowned Colt's revolver, which was a great advance on all previous attempts, and is substantially still in use. The fame attached to Colt's revolvers renders them so well known as to require but little introduction necessary. This make is now extensively used in the United States, and indeed in almost every country of the world, and seems not to lose favor anywhere. The barrel is rifle-bored. The lever-ramrod renders wadding or patch unnecessary, and secures the charge against moisture, or becoming loose by rough handling or hard riding. The hammer, when at full cock, forms the sight by which to take aim, and is readily raised at full cock by the thumb, with one hand. The movements of the revolving chamber and hammer are ingeniously arranged and combined. The breech, containing six cylindrical cells for holding the powder and ball, moves one-sixth of a revolution at a time; it can only be fired when the chamber and the barrel are in a direct line. The base of the cylinder being cut externally into a circular ratchet of six teeth (the lever which moves the ratchet being attached to the hammer); as the hammer is raised in the act of cocking, the cylinder is made to revolve, and to revolve in one direction only; while the hammer is falling the chamber is firmly held in position by a lever fitted for the purpose; when the hammer is raised the lever is removed, and the chamber is released. So long as the hammer remains at half-cock, the chamber is free and can be loaded at pleasure. Col. Colt has improved on this patent. Revolvers made by Remington, Smith & Wesson, Daw, Adams & Dean, and others, are mostly on the same principle as the Colt.

Smart-money. In England, the money which was paid by the person who had taken the enlisting money, in order to get released

from an engagement entered into previous to a regular enlistment. Also, money allowed to soldiers or sailors in the British service for wounds or injuries received.

Smite. To destroy the life of by beating, or by weapons of any kind; to slay by a blow; to kill; as, to smite one with the sword, or with an arrow or other weapon. Also, to beat or put to rout in battle; to destroy or overthrow by war.

Smoke-ball. Is a hollow sphere similar to a light-ball, and filled with a composition which emits a dense, nauseous smoke; it is employed to suffocate the enemy's miners when at work, or to conceal one's own operations; it burns from 25 to 30 minutes.

Smolensk. A fortified town of Russia, capital of the government of the same name, 250 miles west-southwest from Moscow. The French in a most sanguinary engagement here were three times repulsed, but ultimately succeeded in entering Smolensk, and found the city which had been bombarded burning and partly in ruins, August 16-17, 1812. Barclay de Tolly, the Russian commander-in-chief, incurred the displeasure of the emperor Alexander because he retreated after the battle, and Kutusoff succeeded to the command.

Smooth-bore Projectile. See PROJECTILE, SPHERICAL PROJECTILES.

Smyrna. One of the most ancient and important cities of Asia Minor, and the only one of the Greek cities on the western coast which has retained its name and importance to the present day. At an early period it fell into the hands of the Ionians of Colophon; it became a member of the Panionic Confederacy. Its early history is obscure; but thus much is clear, however, that at some period the old city of Smyrna, which stood on the northeast side of the Hermæan Gulf (now the Gulf of Smyrna), was abandoned, and that it was succeeded by a new city, on the southeast side of the same gulf (the present site), which is said to have been built by Antigonous. It had a magnificent harbor, the largest ships could lie alongside the quays. In the civil wars it was taken and partly destroyed by Dolabella, but it soon recovered. In the successive wars under the Eastern empire it was frequently much injured, but always recovered. After various vicissitudes during the Middle Ages, the city fell finally into the hands of the Turks, in whose possession it has since remained.

Snaffle-bit. A kind of slender bit, having a joint in the part to be placed in the mouth.

Snapthance. An old musket of the 17th and first half of the 18th centuries, called also *snaphan*. See GUN.

Snare-drum. The smaller, common military drum, as distinguished from the bass-drum;—so called because (in order to render it more resonant) there is stretched across its lower head a catgut string, or collection of strings.

Snick and Snee. A combat with knives such as the Dutch carry.

Snider Rifle. See SMALL-ARMS.

Soanes. A powerful people of the Caucasus, governed by a king who could bring 200,000 soldiers into the field. They are also called Suani and Suanocolchi.

Sobraon. A town of Northwest India, on the left bank of the Sutlej, 25 miles east-northeast of Ferozpur (or Ferozepore), near which, on February 10, 1846, a most obstinate battle was fought between the British army under Sir Hugh Gough and a Sikh force numbering about 35,000. The Sikhs were strongly intrenched, and vigorously resisted the attacks of their opponents, but the courage and perseverance of the latter ultimately gave them the mastery; the various earthworks were captured in succession, and the Sikhs driven across the Sutlej, with a loss in killed, wounded, and drowned of 18,000. Gough immediately followed up his victory by crossing into the Punjab in pursuit of the fleeing enemy.

Social War. A celebrated contest between the Socii of Italy and the city of Rome, which lasted from 91 B.C. till 89, and was the most formidable war ever carried on in Italy during the dominion of the Romans. It arose from the desire of the Italians to be placed on a footing of equality with the Romans. Nearly 300,000 lives were sacrificed in the contest, and numerous towns destroyed. The senate of Rome were at length compelled to grant the franchise and all other privileges, which they at first absolutely refused to the Italians.

Socket. Generally means any hollow pipe that receives something inserted.

Socket of a Bayonet. The round hollow near the bent or heel of a bayonet, into which the muzzle of a fire-arm is received when the bayonet is fixed.

Sogdiana. The northeastern province of the ancient Persian empire, separated on the south from Bactriana and Margiana by the upper course of the Oxus; on the east and north from Scythia by the Sogdii Comedorum and Oxii Mountains, and by the upper course of the Iaxartes, and bounded on the northwest by the great deserts east of the Sea of Aral. It was conquered by Cyrus, and afterwards by Alexander. After the Macedonian conquest it was subject to the kings, first of Syria and then of Bactria, till it was overrun by the barbarians. The natives of the country were a wild, warlike people of the great Arian race, resembling the Bactrians in their character and customs.

Soissons (anc. *Noviodunum*, subsequently *Augusta Suessonium*). A town of France, in the department of Aisne, on the banks of the river Aisne, about 65 miles northeast of Paris. It was subdued by Julius Cæsar, 57 B.C.; held by Syagrius, after his father Ægidius, till his defeat by Clovis, 486.

Solaks. Were bowmen or archers belonging to the personal guard of the grand seignor. They were always selected from

the most expert bowmen that were among the Janissaries. Their only arms were the sabre, bow, and arrows.

Soldan. The title of the lieutenant-generals of the caliphs, which they bore in their provinces and armies. These officers afterwards made themselves sovereigns. Saladin, general of the forces of King Nouredin of Damascus, was the first that took upon him this title in Egypt, 1165, after having killed the caliph Caym.

Soldier. Is one who enters into an obligation to some chieftain or government to devote for a specified period his whole energies, and even if necessary his life itself, to the furtherance of the policy of that chief or government. The consideration may be immediate pay, or prospective reward; or the contract may be merely an act of loyal devotion. The acknowledgment of the service by the employer constitutes the man a recognized soldier, and empowers him to take life in open warfare, without being liable to the penalties of an assassin and a robber. The fact of being mercenary—that is, of receiving wages for killing and being killed—does not render a soldier's trade less honorable. He bears arms that others may be able to do without them; he is precluded by the exigencies of military training from maintaining himself by peaceful occupation; and it is therefore but fair that those whom he protects should support him, and give him, over and above actual maintenance, reasonable wages for the continual risk of his life. If a man willingly enlist himself as a soldier in what he believes to be an unrighteous cause, it is an act of moral turpitude; but when once enlisted, the soldier ceases to be morally responsible for the justice or iniquity of the war he wages; that rests with his employer. Obedience, implicit and entire, is his sole virtue. The maxim is, "The military force never deliberates, but always obeys." *Brother soldier* is a term of affection which is commonly used by one who serves under the same banners, and fights for the same cause, with another. In a more extensive signification, it means any military man with respect to another.

Soldier of Fortune. During the frequent wars which occurred in Italy, before the military profession became so generally prevalent in Europe, it was usual for men of enterprise and reputation to offer their services to the different states that were engaged. They were originally called *condottieri*, or leaders of reputation. They afterwards extended their sphere of action, and under the title of *soldiers of fortune*, sought for employment in every country or state that would pay them.

Soldiering. The estate of being a soldier; the occupation of a soldier.

Soldierly. Like, or becoming, a real soldier; brave; martial; heroic; honorable.

Soldiers' Friend. A term in the military service which is generally applied to such officers as pay the strictest attention to their

men; granting them reasonable indulgences without injuring the service; seeing their wants relieved; and, above all things, enforcing just dealings and the most prompt settlements. There is much confidence in the multitude when they are justly dealt by, and every soldier fights well under the guidance of a soldiers' friend.

Soldiers' Homes. In the United States, are homes of a permanent character established by the general government for the benefit of old soldiers, or men who were disabled in the military service of their country. The "Soldiers' Home," which is situated about $3\frac{1}{2}$ miles from the Capitol of Washington, was founded in compliance with provisions of act of Congress dated March 3, 1851. It contains about 470 acres, some of which is cultivated for garden produce, flowers, etc., and the remainder forms a magnificent park. In 1848, Gen. Scott forwarded to the Secretary of War the sum of \$118,791.19, levied on Mexico during the war with that country, for the benefit of the soldiers of the U. S. army, and he requested that this amount might be set aside for the construction of an army asylum. The following funds are also set apart for the maintenance of the "Soldiers' Home": All stoppages or fines adjudged against soldiers by sentence of courts-martial, over and above any amount that may be due for the reimbursement of government or individuals; all forfeitures on account of desertion; and all moneys belonging to the estate of deceased soldiers, which are now or may hereafter be unclaimed for the period of three years subsequent to the death of said soldier or soldiers, to be repaid by the commissioners of the institution, upon the demand of the heirs or legal representatives of the deceased; also the sum of $12\frac{1}{2}$ cents per month is stopped from every non-commissioned officer, musician, artificer, and private of the U. S. army. The following persons, members of the "Soldiers' Home," are entitled to the rights and benefits of the institution, viz.: Every soldier of the army of the United States who has served, or may serve, honestly and faithfully, twenty years in the same, and every discharged soldier, who has suffered by reason of disease or wounds incurred in the service and in the line of his duty, rendering him incapable of further military service, if such disability has not been occasioned by his own misconduct. No deserter, mutineer, or habitual drunkard is received into the institution without such evidence of subsequent service, good conduct, and reformation of character as the commissioners may deem sufficient to authorize his admission. There are three commissioners designated to administer the affairs of the asylum, namely, the commissary-general of subsistence, the surgeon-general, and the adjutant-general, whose duty it is to examine and audit the accounts of the treasurer quarterly, and to visit and inspect the "Home" at least once in every month. The

officers of the institution consist of a governor, a deputy governor, and a secretary and treasurer, who, with a medical officer, are detailed from the active or retired list of the army. Inmates of this institution receive a small allowance of pocket-money per month, and they are also paid for any labor they can perform. About \$8 per month is allowed to old soldiers, who, having families, are permitted to live elsewhere than at the "Home." There was also incorporated by the act of Congress dated March 8, 1865, "the National Asylum for Disabled Volunteer Soldiers," which consists of the central asylum, at Dayton, Ohio, the eastern branch at Augusta, Me., and the northwestern branch at Milwaukee, Wis. This asylum is kept up by annual appropriations of Congress. There are similar institutions for old and disabled soldiers in Europe. See ASYLUM, ROYAL MILITARY, and HÔTEL DES INVALIDES.

Soldiers' Thigh. When tight breeches were worn in the British army, the term had its peculiar military application, from the notorious poverty of army men. *Soldiers' thigh* figuratively meant an empty purse; or speaking familiarly, a pair of breeches that sit close and look smooth, because the pockets have nothing in them.

Soldiership. A term which is rarely used; it means military qualities; military character or state; martial skill; behavior becoming a soldier.

Soldiery. A body of soldiers collectively considered; the military. "A camp of faithful soldiery."

Solduriers (Fr.). A term anciently used among the French, to signify those persons who attached themselves to some particular general or military knight, whose fortunes they followed, in consequence of being paid and supported by him.

Sole. The bottom or lower surface of an embrasure.

Solferino. A village of Northern Italy, province of Brescia, 20 miles northeast from Mantua. Here, in 1796, the French conquered the Austrians, and on June 24, 1859, it was again the scene of an overwhelming victory obtained by the French and Italians over the Austrians.

Soli. An ancient town of Asia Minor, on the coast of Cilicia. In the war between Mithridates and the Romans, Soli was destroyed by Tigranes, but subsequently rebuilt by Pompey, who settled there many of the pirates whom he had captured, and called the town after himself, Pompeiapolis.

Solicinium. A town in Roman Germany, on the mountain Pirus, where Valentinian gained a victory over the Alemanni in 369, probably in the neighborhood of the modern Heidelberg.

Solid Shot. See PROJECTILE.

Solid Square. A square body of troops; a body in which the ranks and files are equal.

Sollerets (Fr.). Armor for the feet.

Somma. A town of Italy, Lombardy, not far from the Tecino, near the foot of Lake Maggiore, 27 miles northwest of Milan. It was near Somma that Hannibal gained his first victory on Italian ground, completely defeating the Romans under Scipio, 218 B.C.

Somnauth, or Somnath-Putten. A town of Guzerat, in Hindostan, is situated on the southwest coast of the peninsula of Kattywar. In 1024, Mahmud of Ghizni, the zealous idol-destroyer, appeared before Somnauth, drove its defenders to take refuge in the temple, where they defended themselves with such valor that Mahmud's army was forced to retreat; but the subsequent rout of two Hindu armies which had advanced to the aid of the sacred city so dispirited the defenders, that Somnauth was immediately surrendered, the idol destroyed, and the enormous wealth of the temple carried off, along with the gates of the temple.

Songhay. A former kingdom of Africa. In 1468-1469 the ruler of Songhay marched upon Timbuctoo, and conquered the town and surrounding state. Under Háj Mohammed Askia, who came into power at the end of the 15th century, and who was perhaps the greatest sovereign that ever ruled over Negroland, the Songhay empire extended from Hausa almost to the shores of the Atlantic, and from lat. 12° N. to the confines of Morocco. After many years of revolution and civil war, this great empire became a province of Morocco in 1607.

Sonthals. A tribe of Northern India, brought to Bengal about 1830, where they prospered, till, partly from the instigation of a fanatic, and partly from the exactions of money-lenders, they broke out into rebellion in July, 1855, and committed fearful outrages. They were quite subdued early in 1856, and many were removed to the newly-conquered province of Pegu.

Sooloo, or Suluk Islands. A group of the East Indian Archipelago. The sultan of Sooloo and his subordinate chiefs were formerly notorious for their piracy, and kept up a large fleet for that purpose; but their power was entirely broken by the Spaniards in 1851.

Sora. A town of Naples, in the province of Terra di Lavoro, 15 miles east-northeast from Frosinone. Sora was originally a Volscian city; was seized by the Romans in 345 B.C., and subsequently made a colony; but in 815 the inhabitants rose against the Romans, and joined their enemies, the Samnites. It was not finally secured as a Roman colony till the end of the second Samnite war in 308.

Sorn. Formerly a servile tenure in Scotland, by which a chieftain might, with his followers, live upon his tenants at free quarters.

Sorties (Fr. *sortir*). In a siege, parties who sally out of a town secretly to annoy the besiegers, and retard their operations.

Sottiates, or Sotiates. A powerful and

warlike people in Gallia Aquitanica, on the frontiers of Gallia Narbonensis, were subdued by P. Crassus, Caesar's legate, after a hard-fought battle. The modern *Sos* probably represents the ancient town of this people.

Sound. The velocity of sound in the air, at the temperature of 32° Fahr., is about 1090 feet in a second. It is increased or diminished 1.07 feet for each degree of temperature above or below 32°. The distance of an object can be ascertained by the report of fire-arms, by observing the number of seconds that elapse between the flash and the report of a gun, and multiplying the number by the velocity of sound in air.

Sound, To. To betoken or direct by a sound; as, to sound the retreat; sound the assembly, etc.

Sourabaya, Soerabaya, Soorabaya, or Surabaya. A large seaport town of Java, on the northeast coast. When the French had possession of Java, the French government resolved to make Sourabaya a port of consequence. Gen. Daendels expended large sums in the construction of works for the defense of the harbor, and was proceeding in his plans when the island was taken by the British.

South Carolina. An Atlantic State of the American Union, of a triangular form, with North Carolina and Georgia on its inland sides. It is said to have been discovered by Sebastian Cabot in 1498, or by De Leon in 1512, and to be permanently settled by the English about 1660. The province was divided into North and South in 1729. The Carolinas were slave States. Great excitement prevailed in them in November, 1860, on account of Mr. Abraham Lincoln's election to the presidency of the United States, he being strongly opposed to slavery. South Carolina began the secession from the United States December 20, 1861. The State was restored to the Union in June, 1868. This State took an active part in the civil war (1861-65), on the Confederate side. See CHARLESTON, COLUMBIA, MORRIS ISLAND, MOULTRIE, FORT SUMTER, etc.

Southern Confederacy. See CONFEDERATE STATES OF AMERICA.

Sow. A kind of covered shed, formerly used by besiegers in filling up and passing the ditch of a besieged place, sapping or mining the wall, and the like. It had its name from its being used for rooting up the earth like swine, or because the soldiers therein were like pigs under a sow.

Sowar. A trooper in an Indian cavalry regiment.

Space. A quantity or portion of extension; the interval between any two or more objects; as, the space between ranks.

Spadroon. A sword much lighter than a broadsword, and made both to cut and thrust.

Spahis. Were the cavaliers furnished by the holders of military fiefs to the Turkish army, and formed the *élite* of its cavalry.

The Spahis along with the Janissaries owe their organization primarily to Orchan, the second of the Ottoman sultans, finally to Sultan Amurath I., and when levied *en masse* could number 140,000, but such a levy was very seldom called for. In the field they were divided into two classes, distinguished by the color (red and yellow) of their standards. One class had pistols and carbines, the other bows and arrows, and both carried a sabre, lance, and *jerid*, or javelin. They were excellent irregular troops; but when European organization was introduced into the Turkish army, they were replaced (1826) by regular horse. At the present time the French have numerous regiments of Spahis, raised from among the native tribes of Algeria and from France in about equal proportions; the dress, especially of the indigenous soldiers, partakes very much of the Arab character. The natives are allowed to rise to any grade below that of captain; but all the superior officers are of French descent.

Spain. A kingdom of Europe, occupying the larger portion of the great peninsula which forms the southwestern corner of the European continent, reaching farther south than any other European country, and farther west than any except Portugal. Spain, the *Spania*, *Hispania*, and *Iberia* of the Greeks, and known to the Romans by the same names, was inhabited at the period at which it first receives historical mention, by a people deriving their origin from different races. It is supposed to have been originally inhabited by a distinct race called Iberians; upon whom, however, a host of Celts are supposed to have descended from the Pyrenees. In the earliest times of which we have any record, these two races had already coalesced and formed the mixed nation of the Celtiberians. The Phœnicians and Carthaginians successively planted colonies on the coasts of Spain about 860 B.C.; and the Romans conquered the whole country, 206 B.C., which they erected into a Roman province, consisting of two political divisions,—*Hispania Citerior* (Hither Spain) and *Hispania Ulterior* (Farther Spain). From the time of the complete supremacy of the Romans till the death of Constantine, the condition of Spain was eminently prosperous. In 409, hordes of barbarians, Alans, Vandals, and Suevi, crossed the Pyrenees, and swept over and desolated the peninsula; about 412, the Visigoths invaded the country, and their king, Athaulf, who acknowledged a nominal dependence on the Roman emperor, established the Gothic monarchy in Catalonia. The battle of Xerxes in 711 gave the Moors almost undisputed mastery of nearly the whole of Spain, as well as of the outlying Gothic province of Septimania (Languedoc) in France. The Moors held Spain, for the first few years of their rule, as a dependency of the province of North Africa; but, after the downfall of Muza and his son Abd-el-aziz, who had been the dep-

uty-governor of Spain, the country was governed (1717) by emirs appointed by the caliph of Damascus. The favorite scheme pursued by the Spanish emirs was the extension of their conquests into Gaul, to the neglect of the rising power of the Goths in Asturias; they also took the Balearic Islands, Sardinia, Corsica, and part of Apulia and Calabria; but their northward progress was signally checked on the plain of Tours by Charles Martel. Anarchy and bloodshed were prominent features of the first forty years of Mohammedan rule in Spain. Within this period of forty years, no fewer than twenty emirs had been called to the direction of affairs; but a revolution at Damascus, which unseated the Omniades, and placed the Abbasides in possession of the caliphate, put an end to this state of misrule in Spain. The Moors at length suffered a great defeat at Tarifa, by Alfonso XI. of Castile in 1340, and nearly the whole Christian dominions of Spain were united in one monarchy in 1479; but the power of the Moors was not finally extirpated until 1492, when Spain was consolidated into one empire from the Pyrenees to the Strait of Gibraltar. But the expulsion of the Moors and Jews was productive of the direst results, and the decline of the splendid Spanish empire may be said to have had its origin in the event which raised the country to the height of its magnificence. In the reign of Charles I., Mexico and Peru were added to the possessions of Spain. Philip II., by his enormous war expenditure and maladministration, laid a sure foundation for the decline of the country; and the reigns of Philip III. and Philip IV. witnessed a fearful acceleration in the decline of Spain by the contests with the Dutch, and with the German Protestants in the Thirty Years' War, the intermeddling in the affairs of Northern Italy, the rebellion of the Catalans, the wars with France, and the rebellion of Portugal (1640), which had been united to Spain by Philip II. That of Charles II. was still more unfortunate, and the death of the latter was the occasion of the War of the Spanish Succession. (See SUCCESSION WARS.) During the inglorious reign of Charles IV. (1788-1808), a war broke out with Britain, which was productive of nothing but disaster to the Spaniards, and by the pressure of the French another arose in 1804, and was attended with similar ill success. Charles abdicated in favor of his eldest son, the prince of the Asturias, who ascended the throne as Ferdinand VII. Forced by Napoleon to resign all claims to the Spanish throne, Ferdinand became a prisoner of the French in the year of his accession, and in the same year Joseph, the brother of the French emperor, was declared king of Spain. But an armed resistance was organized throughout the whole country, and the supreme junta, that of Seville, declared war against Napoleon and France on June 6, 1808. In July, England, on solicitation,

made peace with Spain, recognized Ferdinand VII. as king, and sent an army to aid the Spanish insurrection. This war lasted until the beginning of 1814, when the allied armies of England, Spain, and Portugal were thoroughly victorious. For important events which took place during this war, see appropriate headings in this work. Ferdinand VII. treated the subjects who had shown him devoted loyalty with infamous ingratitude, and subsequently obtained the aid of France to establish despotism. The reign of his daughter Isabella II. was disturbed by the Carlist rebellion in 1834-39, in which the British aided the queen with an army under Sir De Lacy Evans. The next events of importance were the contest between Espartero, the regent, and Queen-dowager Christina, for the supreme power during the minority of the queen; Espartero's flight before O'Donnell and Narvaez (1843); his restoration in 1847; banishment of Queen Christina (1854); formation of the O'Donnell ministry (1858); war with Morocco and annexation of St. Domingo (1861); war with Peru and Chili (1864-65), and permanent truce in 1871; Prince Amadeus of Savoy declared king in December, 1870; abdication, February, 1873; insurrection of Don Carlos, 1873-76, when Prince Alfonso, son of Queen Isabella, became king. For more specific history of provinces and cities of Spain, see appropriate headings.

Spancelled. In heraldry, a term applied to a horse, two of whose legs are fettered by a log of wood.

Spandau. A fortified town of Prussia, in the province of Brandenburg, 7 miles west from Berlin. It was taken by the Swedes in 1631, and by the French in 1806.

Spanish Fury, The. A name given, in history, to the attack upon Antwerp by the Spaniards, November 4, 1576, which resulted in the pillage and burning of the place, and a monstrous massacre of the inhabitants.

Spanish War of Succession. See SUCCESSION WARS.

Spare-pole. See ORDNANCE.

Spare-pole Key. See ORDNANCE.

Spare-pole Ring. See ORDNANCE.

Spare-wheel Axle. See ORDNANCE.

Sparta. Also called Lacedæmon, the capital of Laconia and the chief city of Peloponnesus, was situated on the right bank of the Eurotas (now Iri), about 20 miles from the sea. Sparta was never surrounded by walls, since the bravery of its citizens and the difficulty of access to it were supposed to render such defense needless. In the mythical period, Argos was the chief city in Peloponnesus, and Sparta is represented as subject to it. The Dorian conquest of Peloponnesus, which, according to tradition, took place eighty years after the Trojan war, made Sparta the capital of the country. The oldest inhabitants of the country maintained themselves at Amyclæ, which was not conquered for a long time. From va-

rious causes the Spartans became distracted by intestine quarrels, till at length Lycurgus gave a new constitution to the state. This constitution laid the foundation of Sparta's greatness. She soon became aggressive, and gradually extended her sway over the greater part of Peloponnesus. In 748 B.C. the Spartans attacked Messenia, and after a war of twenty years subdued this country. In 685 the Messenians again took up arms, but at the end of seventeen years were again completely subdued, and their country from this time forward became an integral part of Laconia. After the close of the second Messenian war, the Spartans continued their conquests in Peloponnesus. They defeated the Tegeans, and wrested the district of Thyrea from the Argives. At the time of the Persian invasion they were confessedly the first people in Greece; and to them was granted by unanimous consent the chief command in war. But after the final defeat of the Persians, the haughtiness of Pausanias, king of Sparta, disgusted most of the Greek states, and led them to transfer the supremacy to Athens (477). From this time the power of Athens steadily increased, and Sparta possessed little influence outside of the Peloponnesus. The Spartans made several attempts to check the rising greatness of Athens, and their jealousy of the latter led at length to the Peloponnesian war (481). This war ended in the overthrow of Athens, and the restoration of the supremacy of Sparta over the rest of Greece (404). But the Spartans did not retain this supremacy more than thirty years. Their decisive defeat by the Thebans, under Epaminondas, at the battle of Leuctra (371), gave the Spartan power a shock from which it never recovered; and the restoration of the Messenians to their country two years afterward completed the humiliation of Sparta. Thrice was the Spartan territory invaded by the Thebans, and the Spartan women saw for the first time the watch-fires of an enemy's camp. The Spartans now finally lost their supremacy over Greece; and about thirty years afterward the greater part of Greece was obliged to yield to Philip of Macedon. The Spartans, however, kept haughtily aloof from the Macedonian conqueror, and refused to take part in the Asiatic expedition of his son, Alexander the Great. The power of Sparta continued to decline until the beginning of the reign of Cleomenes III. (236), whose reforms for a time infused new blood into the state, and for a short time he carried on war with success against the Achæans. But Aratus, the general of the Achæans, called in the assistance of Antigonus Doon, king of Macedonia, who defeated Cleomenes at the decisive battle of Sellasia (221), and followed up his success by the capture of Sparta. Sparta now sank into insignificance, and was ruled by a succession of native tyrants, till at length it was compelled to abolish its peculiar institutions, and to join the Achæan League. Shortly afterward it

fell, with the rest of Greece, under the Roman power. The Spartans were a race of stern, cruel, resolute, rude, and narrow-minded warriors, capable of a momentary self-sacrificing patriotism, but utterly destitute of the capacity for adopting or appreciating a permanently noble and wise policy.

Spartans. See SPARTA.

Sparthe. An Anglo-Saxon term for a halbert or battle-axe.

Sparum. A kind of dart, which was used by the ancients in war, and was shot out of a cross-bow. The wound it occasioned was extremely dangerous, as its point was triangular. Several of these darts were discharged in a volley.

Spatterdashes. Were a kind of covering for the legs of soldiers, made of cloth, or coarse linen waxed over, and buttoned tight, by which the wet was kept off.

Spatts. Were a kind of spatterdashes, that reached only a little above the ankle.

Spayade. In heraldry, a stag in his third year; a spay.

Spear. A lance or long weapon with a sharp point, formerly used as a manual or missile weapon. Pliny ascribes the invention of the spear to the Etolians. The spear of the Greeks was generally of ash, with a leaf-shaped head of metal, and furnished with a pointed ferrule at the butt, with which it was stuck in the ground; a method used, according to Homer, when the troops rested on their arms, or slept upon their shields. The cross spear-heads of the Britons were all pyramidal, narrowing at the base. The heads of the Anglo-Saxon spears were exceedingly long, and sometimes dreadfully barbed.

Spear-hand. The hand in which a horseman holds a spear; the right hand.

Spear-head. The pointed end of a spear.

Spearman. One who is armed with a spear.

Special Duty. Soldiers may be employed on duties not strictly military, when the exigencies of the service require it, for the reason that they are incident to the operations of an army; as, mechanics, laborers, cooks, and attendants in hospitals, clerks, scouts, etc. Soldiers when detailed on these duties are generally reported on special or extra duty, but are required to attend the regular inspections and musters, and if not proficient in drill, should be required to attend drills until they know their duties as soldiers. Officers when placed on duty which temporarily relieves them from duty with their companies, as acting commissaries and quartermasters, or on court-martial duty, etc., are reported on special duty.

Special Orders. See ORDERS, SPECIAL.

Specific Gravity. See GRAVITY.

Specification. The designation of particulars; particular mention; as, the specification of a charge against a military officer. A written statement containing a minute description or enumeration of particulars, as of charges against officers or soldiers.

Speen. A parish of England, in Berkshire, 2 miles from Newbury, in which the second battle of Newbury was fought, October 27, 1646.

Spencer Rifle. See SMALL-ARMS, and MAGAZINE GUNS.

Spend. This term is sometimes used in military matters to express the consumption of anything; as, to spend all your ammunition.

Spent Ball. A ball shot from a fire-arm, which reaches an object without having sufficient force to penetrate it.

Speyer, also Speier. The capital of Rhenish Bavaria (the former Palatinate), and one of the oldest towns in Germany, stands at the influx of the Speyerbach in the Rhine 28 miles north of Carlsruhe. During the Orleans Succession war—well called by the Germans the *Mordbrenner Krieg*—the whole Palatinate was savagely wasted, Speyer was taken by the French, its inhabitants driven out, and the city blown up with gunpowder and burned to the ground. Only the cathedral resisted the barbarous efforts to mine it. In 1794, it was wasted by the French under Custine, and has never recovered from these calamities.

Spherical Bullets. See PROJECTILE.

Spherical Case-Shot. A spherical case-shot consists of a thin shell of cast iron, containing a number of musket-balls, and a charge of powder sufficient to burst it; a fuze is fixed to it as in an ordinary shell, by which the charge is ignited and the shell burst at any particular instant. A spherical case-shot, when loaded ready for use, has about the same specific gravity as a solid shot, and therefore, when fixed with the service charge of powder, its range, and its velocity at any point in its range, is about equal to that of a solid shot of the same caliber. The spherical case mostly used for field service is the 12-pounder, and contains, when loaded, 90 bullets. Its bursting charge is 1 ounce of powder, and it weighs 11.75 pounds. Its rupture may be made to take place at any point in its flight, and it is therefore superior to grape or canister. The attrition of the balls with which it is loaded, formerly endangered the firing of the bursting charge. This is now obviated, in making one mass of the balls, by pouring in melted sulphur. It is also prevented by Capt. Boxer's improved spherical case-shot, of which there are two forms. In one form the bursting charge of powder is contained in a cylindrical tin box, attached to a brass socket which receives the fuze, and which is screwed into the shell. In the other, the part of the shell containing the bursting charge is separated from that containing the bullets by a diaphragm of sheet-iron, cast into the shell (*i.e.*, the shell is cast on to the diaphragm which is inserted into the core). The bullets are introduced into the shell by a second orifice, and are kept in their places by a composition afterwards

poured in. The present 12-pounder spherical case-shot, fixed with a charge of 2½ pounds of powder, is effective at 1500 yards. The proper position of the point of rupture varies from 50 to 180 yards in front of, and from 15 to 20 feet above, the object. The mean number of destructive pieces from a 12-pounder spherical case-shot, which may strike a target 9 feet high and 54 feet long, at a distance of 800 yards, is 80. The spherical case-shot from rifle-cannon is said to be effective at over 2000 yards. Spherical case should not be used at a less distance than 500 yards.

Spicheren, or Speicheren. See SAAR-BRUCK.

Spike Cannon, To. Is to drive into the vent a jagged and hardened steel spike with a soft point, or a nail without a head; break it off flush with the outer surface and clinch the point inside by means of a rammer. A gun may be unspiked if the spike is not screwed in or clinched, and the bore is not impeded, by putting in a charge of powder one-third of the weight of the shot, and ramming junk-wads over it; laying on the bottom of the bore a slip of wood, with a groove on the under side containing a strand of quick-match, by which fire is communicated to the charge. In a brass gun, take out some of the metal at the upper orifice of the vent, and pour sulphuric acid into the groove, and let it stand some hours before firing. If this method, several times repeated, is not successful, unscrew the vent-piece if it be a brass gun; and if an iron one, drill out the spike, or drill a new vent.

Artillery can be rendered unserviceable by other methods besides spiking, as follows: (1) Wedge a shot in the bottom of the bore by wrapping it with felt, or by means of iron wedges, using the rammer or a bar of iron to drive them in. (2) Cause shells to burst in the bore of bronze guns. (3) Fire broken shot from them with large charges. (4) Fill the piece with sand over the charge, to burst it. (5) Fire a piece against another, muzzle to muzzle, or the muzzle of one to the chase of the other. (6) Light a fire under the chase of a bronze gun, and strike on it with a sledge, to bend it. (7) Break off the trunnions of iron guns; or burst them by firing them at a high elevation, with heavy charges and full of shot.

To drive out a shot wedged in the bore: unscrew the vent-piece if there be one, and drive in wedges so as to start the shot forward; then ram it back again in order to seize the wedge with a hook; or pour in powder, and fire it after replacing the vent-piece. In the last resort, bore a hole in the bottom of the breech, drive out the shot, and stop the hole with a screw. When a shot is jammed in a gun and cannot be rammed home to the cartridge, destroy the charge by pouring water down the vent and muzzle until the ingredients are dissolved, and cleared out of the bore; then introduce

a small quantity of powder through the vent and blow out the shot.

Spin Hay, To. Is to twist it up in ropes, very hard, for an expedition; by which means it is less bulky, and less troublesome for the cavalry to carry behind them. An expert horseman can spin five days' forage into a very narrow compass.

Spingard. A kind of small cannon.

Splay. The divergence outwards from the line of fire of the lines which mark the bottom of the sides of an embrasure.

Splinter-bar. See **ORDNANCE, CARRIAGES FOR.**

Splinter-proof. Strong enough to resist the splinters of bursting shells.

Spoils. Whatever is taken from the enemy in time of war. Among the ancient Greeks, the spoils were divided among the whole army, only the share given to the general was the largest; but among the Romans the spoils belonged to the republic.

Spoleto (anc. *Spoletium*). A city of Central Italy, province of Umbria, is situated on a rocky hill, 61 miles north-northwest of Rome. During the second Punic war, Hannibal is said to have been repulsed by the colonists in an assault which he made on the town (217 B.C.), after the battle of Thrasy-mene. In 1860 it was taken by the Italians from a body of Irish mercenaries in the service of the pope, and now forms part of the kingdom of Italy.

Sponge. See **IMPLEMENTS.**

Sponge and Rammer-stop. See **ORDNANCE, CARRIAGES FOR.**

Sponge-bucket. See **IMPLEMENTS.**

Sponge-chain. See **ORDNANCE, CARRIAGES FOR.**

Sponge-hook. See **ORDNANCE, CARRIAGES FOR.**

Spontoon. A weapon bearing resemblance to a halberd, which, prior to 1787, was borne instead of a half-pike by officers of British infantry. It was a medium for signaling orders to the regiment. The spontoon planted in the ground commanded a halt; pointed backwards or forwards, advance or retreat; and so on.

Sporting Powder. Gunpowder used in sporting arms,—usually finer grained than that for military arms.

Sporting Rifle. A rifle made especially for hunting. There is no invariable feature distinguishing it from other rifles. Ordinarily the rear sight is not elevating.

Spottsylvania Court-house. A village in Spottsylvania Co., Va., situated on the river Po, 65 miles north from Richmond. A series of desperate battles took place in the neighborhood of this village between the Federals and Confederates, from May 8 to 21, 1864, in which the former compelled the latter, after much carnage, to retreat to the North Anna River, which ultimately resulted in the battle of Cold Harbor (which see).

Spread-eagle. In heraldry, an eagle, or the figure of an eagle, with its wings ele-

vated and its legs extended;—often met as a device in heraldry, upon military ornaments, and the like.

Springfield. A post-town, capital of Greene Co., Mo., 180 miles southwest of Jefferson City. Near here was fought the desperate battle of Wilson's Creek, in which the Federals had the advantage over the Confederates, but lost their brave general, Nathaniel Lyon, August 10, 1861.

Springfield. A city of Massachusetts, on the east bank of the Connecticut River, 98 miles west by south of Boston. The national armory is located here, which repaired and altered in 1869 upwards of 25,000 rifles and muskets. The present U. S. breech-loader, model of 1873, is made here.

Springfield Rifle. See **SMALL-ARMS.**

Sprue. See **ORDNANCE, CONSTRUCTION OF, MOLDING.**

Spur. An apparatus fastened to the heel of a horseman, for goading the horse. It is much less used than formerly. All cavalry soldiers wear spurs; but their use, except in the heat of an actual charge, is discouraged as much as possible. In the days of chivalry, the use of the spur was limited to knights, and it was among the emblems of knighthood. To win his spurs, was for a young man to earn knighthood by gallant conduct. The degradation of a knight involved the hacking off of his spurs; and the serving before a knight of a pair of spurs on a dish, was a strong hint by his host that he had outstayed his welcome.

Spurs, Battle of the. See **COURT-MARTIAL.**

Spy. In war, is a useful but not highly honored auxiliary, employed to ascertain the state of an enemy's affairs, and of his intended operations. Spies have been used in all wars from the time when Moses sent Joshua on such a purpose to the present time. Their employment is quite recognized by the law of nations as interpreted by Grotius, Vattel, and Martens; nor is it held to be any dishonor to a general to avail himself of their services. On the other hand, the spy himself is looked upon as an outlaw, and one devoid of honor. If taken by the enemy, he is put to death ignominiously and without mercy. As, however, the calling is so dangerous, and so little redounds to honor, it is never permissible for a general to compel by threats any person, whether of his own or the hostile party, to act as a spy; but he is at liberty to accept all such services when proffered. A spy is well paid, lest he betray his employer. In the British army, spies are usually controlled by the quartermaster-general. Martial law, though distinct enough in ordering the death of a spy, is not clear in defining what constitutes a spy. A man—not of the enemy—within the enemy's lines, and in the enemy's uniform, would presumably be a spy. If in civil dress, and unable to give a good account of himself, his chance of hanging would be considerable; but if found in one camp in the uniform of the opposite side, he may not

be treated otherwise than as a prisoner of war, or at least as a deserter from the enemy. Both as regards honor and penalties, it would seem that spies ought in fairness to be divided into two classes,—first, those who betray their own country to an enemy; secondly, those who, being enemies, contrive surreptitiously to obtain information by penetrating into the opposing army. The first class are traitors of a deep dye, for whom no ignominious death is too bad; but the second class are often brave men, who dare much in the service of their country. It is unfair to accord them the same treatment as the traitors.

Squad. A small portion of a company, troop, or battery, placed in the especial charge of an officer or non-commissioned officer for purposes of inspection and supervision. In the infantry it corresponds with a section. It also signifies a small number of men drilled together. The term *awkward squad* is applied to those soldiers who, on account of clumsiness or want of attention, are sent back to the lowest squad to be re-drilled.

Squad Book. In the British service, is the roll of a squad, containing, besides the names, the trades and other particulars of the men.

Squad-bags. In the British service, are black canvas bags, which are issued at the rate of one to every 25 men, and are intended to contain those articles of a man's kit which are not comprised in the "service kit." They are only used when a regiment is in the field or on the line of march. In India, where knapsacks are never carried, a small squad-bag is issued to each soldier.

Squadron. In military language, denotes two troops of cavalry. It is the unit by which the force of cavalry with an army is always computed. Three or four squadrons constitute a regiment. The actual strength of a squadron ranges from 120 to 200 sabres.

Squall. A sudden and violent gust of wind, often attended with rain or snow. *Black squall*, a squall attended with dark, heavy clouds. *Thick squall*, a black squall accompanied by rain, hail, sleet, etc. *White squall*, a squall which comes unexpectedly, without being marked in its approach by the clouds.

Square. In military evolutions, is the forming of a body of men into a rectangular figure, with several ranks or rows of men facing on each side. With men of ordinary firmness, a square should resist the charges of the heaviest horse. The formation is not new, for a Grecian *Syntagma* was a solid square of 16 men in every direction; but in modern warfare, the solid square having been found cumbrous, has been abandoned for the hollow square, with officers, horses, colors, etc., in the centre. The front rank kneels, and the two next stoop, which enables five ranks of men to maintain a rolling fire upon an advancing enemy, or to pour in a murderous volley at close quarters.

Square-pierced. In heraldry, a term used to designate a charge perforated with a

square opening, so as to show the field. A cross square-pierced is often improperly confounded with a cross quarter-pierced, where the intersecting part of the cross is not merely perforated, but entirely removed.

Squire. An attendant on a warrior was formerly so called.

Stab. To pierce with a pointed weapon; as, to be stabbed by a bayonet, dagger, etc.

Stabiz (now *Castella Mare di Stabia*). An ancient town in Campania, between Pompeii and Surrentum; was destroyed by Sulla in the Social war.

Stable Guard. In each squadron, the stable guard generally consists of a corporal and one man for every 20 horses. It is their duty to feed the horses, watch over their safety during the night, and attend to the general police of the stables, being assisted by an additional detail at the hours of stable call.

Stable Horse. A name formerly applied to that part of the Tippoo Sahib's cavalry which was best armed, accoutred, and most regularly disciplined.

Stack Arms. To set up muskets or rifles together, with the bayonets crossing one another, and forming a sort of conical pile.

Stack of Arms. A number of muskets or rifles set up together, with the bayonets crossing one another, forming a sort of conical pile.

Stacket. A stockade.

Stadia. A very simple aid in estimating distances, consists of a small stick, held vertically in the hand at arm's length, and bringing the top of a man's head in line with the top of the stick, noting where a line in the eye of the observer to the feet of the man cuts the stick or *stadia*, as it is called. To graduate the stadia, a man of the ordinary height of a foot-soldier, say 5 feet 8 inches, is placed at a known distance, say 50 yards, and the distance on the stick covered by him when it is held at arm's length is marked and divided into eight equal parts. If the distance is now increased until the man covers only one of these divisions, we know he is at a distance equal to $50 \times 8 = 400$ yards. This instrument is not very accurate, except for short distances. A much more accurate stadia is constructed by making use of a metal plate having a slit in it in the form of an isosceles triangle, the base of which, held at a certain distance from the edge, subtends a man (5 feet 8 inches), say at the distance of 100 yards. A slider moves along the triangle, being always parallel to the base, and the length of it comprised between the two sides of the triangle represents the height of men at different distances, which are marked in yards on the side of the triangle, above or below, according as the object looked at is a foot-soldier or horseman. In order to keep the stadia always at the same distance from the eye, a string is attached to the slider, the opposite end having a knot tied in it, which is held between the teeth while using the

instrument, which is held in the right hand, the slider being moved with the left-hand finger. The string should always be kept stretched when the instrument is used, and the line in a vertical position. It must be graduated experimentally by noting the positions in which the slider represents the height of the object. The instrument used is not, however, reliable. Its uncertainty increases in an equal ratio with the distance of the object observed. At the extreme ranges it is quite useless. At the school for firing, at Vincennes, therefore, they rely entirely on the eye alone for the judgment of distances, and great pains by careful practice and instruction is taken to perfect that judgment. A simple instrument by which distances can be determined is, therefore, still a great desideratum.

Staff. The staff of an army consists of a body of skilled officers whose duty it is to combine and give vitality to the movements and mechanical action of the several regiments and drilled bodies composing the force. The distinction between an officer on the staff of an army and a regimental officer is that the latter is concerned with his own regiment alone, while the former deals with his army (of course under the orders of his commanding officer), or section of an army, and regulates the combined action of the several arms and bodies of men. A good staff is all-important to the success of a military enterprise. In the British service the *general staff* of an army comprises the general in actual command, with the subordinate generals commanding the several divisions and brigades; as assistants to these the officers of the adjutant-general's department,—i.e., the adjutant-general, his deputy, assistants, and deputy-assistants, if the army be large enough to require them all. Similarly, the officers of the quartermaster-general's department; the brigade-major; the provost-marshal, and the judge-advocate.

In the U. S. service the general staff consists of the officers of the several military bureaux, such as of the adjutant-general's department, the quartermaster's department, etc. For the officers comprising these corps, see appropriate headings throughout this work.

The *general staff* of the British army consists at present of a field-marshal commanding-in-chief, whose headquarters are at London; under him, of a lieutenant-general commanding-in-chief in Ireland. This command includes, of course, the general officer commanding in each military district of the United Kingdom and in each colony; each of these generals having the usual subordinate staff subject to his orders. India forms a nearly independent command, under a commander-in-chief, whose headquarters are at Bengal. There are subordinate commanders-in-chief in Bombay and Madras; and in each presidency there are several military divisions.

The *personal staff* consists of the aides-de-camp and military secretaries to the respective general officers. These officers, who are treated of separately in this work, are appointed within certain limits by the generals whom they serve, and their appointments expire on those generals ceasing to command.

The *garrison staff* consists of the officers governing in fortresses and garrisons; as commandants, fort-majors, town-majors, fort-adjutants, and garrison-adjutants.

The *civil or department staff* includes those non-combatant officers who have to provide for the daily requirements of the troops. These are the commissaries, barracks, medical, chaplains, purveyors, store, and veterinary departments.

The *recruiting staff* consists of inspecting field-officers, district paymasters, district adjutants, and superintending officers.

The *pensioner staff* includes only the staff-officers of the enrolled force.

Regimental Staff.—(See OFFICERS, STAFF.) Staff-officers should carry in their heads all general information regarding the army with which they are serving; the composition and distribution of corps, divisions, brigades, etc.; they should remember as accurately as possible the strength of each battalion in their immediate division, and the names of the respective commanding officers. Officers of the headquarters staff should know the position of every division or detachment each night; their composition and strength, and the names of their commanders, etc.

In communicating orders to others, staff-officers must speak and write in the name of their generals. They must remember that they have no power of themselves to confer favors, and that all patronage rests with the general. In theory they are merely his agents, and, although, in practice, officers of importance have much in their power, they should be careful to prevent its being generally known. Their commander must never be ignored, even when they know him to be a fool. It is not that you injure an individual by slighting him, but that by doing so you deprive of that general confidence which for the public good it is essential he should possess.

In delivering verbal orders, and in their dealings with superior officers, the staff should be most respectful. A staff-officer should feel bound by his position, if not by his breeding, to treat every one with the courtesy due from one gentleman to another. The motto for the staff should be "affability and reticence."

Staff, Cylinder. See INSPECTION OF CANNON.

Stafford. A town of England, in Staffordshire, 123 miles northwest by west from London. In the civil war of the 17th century, it was occupied by the king's forces, after the capture of Lichfield by their adversaries. An indecisive battle was fought at

Hopton Heath, in the vicinity, in 1648, and at a later period the town was taken by the Roundheads, under Sir William Brereton. The castle was also taken shortly after, and at the close of the war was entirely demolished.

Stakes, Pointing-. See POINTING-STAKES.

Stalwart. Brave; bold; strong; redoubted; daring.

Stamford. An ancient town of England, in Lincolnshire, 12 miles northwest from Peterborough. The Britons and Saxons here defeated the Picts and Scots in 449. Many of the Jews of Stamford were slain, and the whole community plundered in 1190 by those who had enlisted for the Crusade.

Stand. The act of opposing. Thus, troops that do not yield or give way, are said to make a stand.

Stand, To. To *stand one's ground*, to keep the ground or station one has taken; to maintain one's position; as, raw troops are not able to stand their ground against veteran soldiers. To *stand fire*, to receive the fire of arms from an enemy without giving way. To *make a stand*, to halt for the purpose of offering resistance to a pursuing enemy.

Stand at Ease. In the British service, is to be allowed, when in the ranks, a certain indulgence with regard to bodily position, with or without arms.

Stand Fast. Is the term used as a caution to some particular part of a line or column, to remain quiescent while the rest are moving.

Stand of Arms. See ARMS, STAND OF.

Stand of Ammunition. See AMMUNITION, STAND OF.

Stand of Colors. A single color, or flag.

Stand to the Guns. Is to prepare for action, by taking one's station at the guns.

Stand to your Arms. Is a cautionary command, when soldiers are put upon the alert.

Standard. A measure by which men enlisted into the army have the regulated height ascertained.

Standard. In its widest sense, a standard is a flag or ensign under which men are united together for some common purpose. The use of the standard as a rallying-point in battle takes us back to remote ages. The Jewish army was marshaled with the aid of standards belonging to the four tribes of Judah, Reuben, Ephraim, and Dan; and the Egyptians had ensigns with representations of their favorite animals. The flag of Persia was white, and, according to Xenophon, bore in his time a golden eagle with expanded wings; it was fixed on a chariot, and thus conveyed to the field of battle. Æschylus, in enumerating the six chiefs who, headed by Polynices, set themselves in battle array against Thebes, describes the device on the standard of each. In the earliest era of Roman history, a bundle of hay or fern is said to have been used as a

military standard, which was succeeded by bronze or silver figures of animals attached to a staff, of which Pliny enumerates five,—the eagle, the wolf, the minotaur, the horse, and the boar. In the second consulship of Marius, 104 B.C., the other animals were laid aside, and only the eagle retained, and down to the time of the later emperors, the eagle, often with a representation of the emperor's head beneath it, continued to be carried with the legion. On the top of the staff was often a figure of Victory or Mars. Each cohort had also an ensign of its own, consisting of a serpent or dragon woven on a square piece of cloth, and elevated on a gilt staff with a cross-bar. Under the Christian emperors, the *Labarum* was substituted for the imperial standard. Standards or ensigns among the Greeks were of different kinds; some had the representations of different animals, bearing some relation to the cities they belonged to. Among the earlier Greeks the standard was a piece of armor at the end of a spear; though Agamemnon, in Homer, uses a purple vail to rally his men, etc. Afterwards the Athenians bore the olive and owl; the Thebans, a sphinx; the other nations, the effigies of their tutelary gods, or their particular symbols, at the end of a spear. The Corinthians carried a pegasus, the Messenians their initial M, and the Lacedæmonians Λ. But the most frequent ensign among the Greeks was a purple coat upon the top of a spear. The flag or standard elevated was a signal to begin the battle, and the standard depressed was a signal to desist. The Anglo-Saxon ensign was splendid. It had on it the white horse, the Danish being distinguished by the raven. Various standards of great celebrity occur in mediæval history, among which may be enumerated the Flag of the Prophet (which see); the standard taken from the Danes by Alfred of England; and the Oriflamme, originally belonging to the Abbey of St. Denis, and borne by the counts of Vexin, which eventually became the standard of the French kingdom. In the Middle Ages the ensigns of the army were the banderols, banners, guidons, pencils, and pennons, for which see appropriate headings. In strict language, the term standard is applied exclusively to a particular kind of flag, long in proportion to its depth, tapering towards the fly, and, except when belonging to princes of the blood royal, slit at the end. Each baron, knight, or other commander in feudal times, had a recognized standard, which was distributed among his followers. The length of the standard varied according to the rank of the bearer. A king's standard was from 8 to 9 yards in length; a duke's, 7 yards; a marquis's, 6½ yards; an earl's, 6 yards; a viscount's, 5½ yards; a baron's, 5 yards; a banneret's, 4½ yards; and a knight's, 4 yards. There was never a complete coat of arms on the standard; it generally exhibited the crest or supporter with a device or badge of the owner, and

every English standard of the Tudor era had the cross of St. George at the head. Standards were registered by the heralds, and the charges on them selected and authorized by an officer-of-arms.

Standard, Battle of the. See NORTH-ALLERTON.

Standard Hill. A hill in England, so called because William the Conqueror upon it set his standard, before he gave battle to Harold.

Standard-bearer. An officer of an army, company, or troop, who bears a standard; an ensign of infantry or a cornet of horse.

Standard-rule. See INSPECTION OF CANON.

Standing. Settled, established, not temporary. *Standing army*, is an army which is kept up by a country, and is liable to every species of duty, without any limitations being fixed to its service.

Standing. Rank; condition. It likewise signifies length of time; as, such an officer is of very old standing in the army.

Stanford Bridge. In Yorkshire, England. In 1066, Tostig, brother of Harold II., rebelled against his brother, and joined the invading army of Harold Hardrada, king of Norway. They defeated the northern earls and took York, but were defeated at Stanford Bridge by Harold, September 25, and both were slain.

Stang-ball. A projectile consisting of two half-balls united by a bar; a bar-shot.

Stanislaus, Saint. A Polish order of knighthood, founded by Stanislaus, king of Poland, in 1765; renewed by the emperor Alexander in 1815.

Star. In heraldry, the star is of frequent occurrence; it sometimes represents the heavenly body so called, and sometimes the rowel of a spur. In the latter case it is blazoned a *Mullet*. Stars of more than five points should have the number of points designated, and the points may be wavy. The star, or *estoile*, with wavy points, is often designated a blazing star; and when the points are more than six in number, it is usual to represent only every second point as waved. The star is a well-known ensign of knightly rank. A star of some specified form constitutes part of the insignia of every order of knighthood.

Star Fort. An inclosed field-work, in shape like the heraldic representation of a star.

Star, Order of the. An order of knighthood formerly existing in France, founded by John II. in 1360, in imitation of the then recently instituted order of the Garter in England. The ceremony of installation was originally performed on the festival of the Epiphany, and the name of the order is supposed to have been allusive to the Star of the Magi.

Star of India, The Order of the. An order of knighthood instituted by Queen Victoria in June, 1861, with the view of affording the princes, chiefs, and people of the

Indian empire a testimony of her majesty's regard, commemorating her majesty's resolution to take on herself the government of India and rendering honor to merit and loyalty. The order consists of the sovereign, a grand master, who is to be the governor-general of India for the time being, and 25 knights, together with such extra and honorary knights as the crown may appoint. The members of the order are to be military, naval, and civil officers who have rendered important service to the Indian empire, and such native princes and chiefs of India as have entitled themselves to her majesty's favor. The insignia consists of a collar, badge, and star. The collar of the order is composed of the heraldic rose of England, two palm branches in saltire tied with a ribbon, and a lotus-flower alternating with each other, all of gold enameled, and connected by a double golden chain. From an imperial crown, intervening between two lotus-leaves, depends the *badge*, consisting of a brilliant star of five points, and hanging from it an oval medallion, with an onyx cameo profile bust of Queen Victoria, encircled by the motto, "Heaven's light our Guide," in gold letters, on an enriched border of light-blue enamel. The *investment badge* is similar to the collar-badge, but with the star, the setting of the cameo, and the motto all of diamonds; it is worn pendent from a ribbon of pale blue with white borders. The *star* of the order is a five-pointed star or mullet of diamonds on an irradiated field of gold. Around it, on an azure fillet bordered with gold, is the same motto in diamonds, the whole encircled by wavy rays of gold.

Star-gauge. See INSPECTION OF CANON.

Statant. In heraldry, a term applied to an animal standing still, with all the feet touching the ground. If the face be turned to the spectator it is said to be *statant guardant*, or in the case of a stag, at gaze.

State. In the British service, is a statement of the number of officers and men of any body of troops, distinguishing those present, those employed, absent, or sick, and the different ranks under separate headings.

States of the Church. See PAPAL STATES.

Station. To place; to set; or to appoint to the occupation of a post, place, or office; as, to station troops on the right or left of an army; to station a sentinel on a rampart.

Station, Military. A place calculated for the rendezvous of troops, or for the distribution of them; also, a spot well calculated for offensive or defensive measures. The name of *stationes*, or stations, was given by the Romans to the guard which was kept in the daytime at the gates of the camp, and at the intrenchments. The *statio agraria* was an advanced post to prevent surprise, insure the safety of prisoners, etc. The chief use was to keep the military *sway* secure from hostile incursions, whence we find them at

the concurrence of roads. The word is also extensively applied to the old military stations of the Romans, when encampments of towns existed. The *statura castra* were encampments for a short time; the *castra* were the same, but might be occupied only for one night. The *hyberna castra*, or winter camps, were elaborately fortified, even with stone walls, houses within, etc., so that many towns grew out of them.

Status in Quo, or Status Quo (Lat.). A treaty between belligerents, which leaves each party in *status quo ante bellum*,—that is, in the state in which it was before the war.

Stays. See **ORDNANCE, CARRIAGES FOR.**
Steam-gun. A machine or contrivance by which balls or other projectiles may be driven by the force of steam.

Steed. A horse either for state or war.

Steel. See **ORDNANCE, METALS FOR.**

Steel Punches. See **INSPECTION OF PROJECTILES.**

Steenkerke, or Steenkerque. A village of Belgium, province of Hainaut, 15 miles north-northeast of Mons. The allies, commanded by William III. of England, were here defeated by the French, July 24, 1692.

Step. Progression by one removal of the foot. It likewise signifies pace. *To step*, to move forward or backward by a single change of the place of the foot. *To step out*, is to lengthen the step, without altering the cadence. *To step short*, is to diminish or slacken the pace, according to the tactics. These phrases are frequently used in military movements when it is found necessary to gain ground in front, or to give the rear of a column, etc., time to acquire its proper distance. *To step off*, is to take a prescribed step from a halted position, in common or quick time, in conformity to some given word of command or signal. *Balance-step*, is so called from the body being balanced upon one leg, in order to render it firm and steady in military movements, etc. Step is likewise figuratively used to signify promotion; as, the next step from a lieutenancy is a captaincy, from a captaincy a majority, etc.

Stettin. A fortified town of Prussia, capital of the province of Pomerania, on the left bank of the Oder, 78 miles northeast from Berlin. In 1121, Boleslas, duke of Poland, gained possession of it. The peace of Westphalia gave it to the Swedes. From them it passed to the Prussians, with whom, though not without some interruptions, it has since remained. In 1171 it was besieged by the Danes; in 1677 by the elector of Brandenburg; in 1718 by the Prussians; and from 1806 to 1818 it was occupied by the French.

Steward, Hospital. See **HOSPITAL STEWARD.**

Stick, Gold. See **GOLD STICK.**

Stick, Silver. See **SILVER STICK.**

Stickler. A sidesman to fencers, or second to a duelist.

Sticklestadt (Norway). Here Olaf II.,

aided by the Swedes, was defeated and slain in his endeavors to recover his kingdom from Canute, king of Denmark, July 29, 1080.

Stiletto. A small dagger with a round pointed blade.

Stillwater. A township of the United States, on the Hudson River and on Saratoga Lake. The township includes the incorporated village of Mechanicville and the post-village of Bemis's Heights, notable for the two battles of September 19 and October 7, 1777 (sometimes called the battles of Stillwater), which led to the surrender of Burgoyne.

Stink-pot. Is a shell, often of earthenware, charged with combustibles, which, on bursting, emit a foul smell and a suffocating smoke. It is useful in sieges for driving the garrison from their defenses; also in boarding a ship, for effecting a diversion while the assailants gain the deck. The stink-pot is a favorite weapon of the Chinese. Under the more elegant title of *asphyxiated shell*, the French and other modern nations have experimented considerably on this mode of harassing an enemy.

Stipendium. The amount of pay for soldiers, a term in general use among the Romans.

Stirling. An ancient town of Scotland, the chief town of Stirlingshire, 81 miles northwest from Edinburgh. During the Danish invasion in 1009, it was the headquarters of the Scottish army. In the vicinity was fought the battle of Stirling in 1297. The town was taken by Edward I., after a siege of three months, in 1304. It was held by the English for ten years, until it was retaken by Robert Bruce after the battle of Bannockburn. In 1651, after the battle of Dunbar, the castle was taken by Gen. Monk; and it withstood a siege by the Highlanders in 1745.

Stirrup. A kind of ring, or bent piece of metal, leather, etc., horizontal in one part for receiving the foot of the rider, and attached to a strap which is fastened to the saddle,—used to assist persons in mounting a horse, and to enable them to sit steadily in riding, as well as to relieve them by supporting a part of the weight of the body.

Stirrup-cover (Sp. *tapadera*). A hood made of leather attached to a stirrup to protect the foot of a mounted soldier.

Stocade. To fortify with sharpened posts. See **STOCKADE.**

Stoccado. A push or thrust with a rapier.

Stock. The whole of the wooden part of a musket or pistol. Also, the neck-gear of a soldier, generally of black leather, answering the double purpose of keeping the cold out and the soldier's head up.

Stock. See **ORDNANCE, CARRIAGES FOR CAISSON.**

Stockach. A town of Germany, in the southeast of Baden, 15 miles northwest of Constance. Near here the Austrians under

the Archduke Charles defeated the French, March 25, 1799.

Stockade. A work in which a palisade of strong and closely-planted timbers constitutes the principal defense. The stockades or picket-works usually employed against Indians are composed of rough trunks of young trees cut into lengths of 12 or 14 feet, and averaging 10 or 12 inches in diameter. They should be firmly planted close together. A banquette or step will generally be required, and the loop-holes so arranged that they cannot be used from the outside. If necessary, such a work can be strengthened by ditch and abatis, and flanked by block-houses.

Stockholm. The capital of Sweden, situated at the junction of the Lake Malar with an inlet of the Baltic, 320 miles northeast from Copenhagen. Stockholm sustained several sieges. One of the most memorable of these took place in 1501 and 1502, when it was held for nearly six months by Queen Christina of Denmark against the Swedish insurgents, but was at last surrendered after the garrison had been reduced from about 1000 to 80 in number. A still more noble defense of the city was made in 1520, by Christina Gyllenstierna against Christian II. of Denmark. It was surrendered after a siege of four months; but the terms of the surrender were violated soon after by the conqueror ordering the execution of all the most distinguished Swedes in the town. This and similar acts of treachery and cruelty led to the final expulsion of the Danes by Gustavus Vasa. A peace was concluded here, between the king of Great Britain and the queen of Sweden, by which the former acquired the duchies of Bremen and Verden as elector of Brunswick, November 20, 1719. A treaty took place here, between Sweden and Russia, in favor of the Duke of Holstein-Gottorp, March 24, 1724; another between England and Sweden on March 8, 1818; and between England, France, and Sweden, November 21, 1855.

Stockport. A town of England, in Cheshire, on the borders of Lancashire, at the confluence of the Mersey and the Tame, 5 miles southeast of Manchester. The castle, which has now entirely disappeared, was held in 1173, by Geoffrey de Constantine against Henry II. During the civil war of the 17th century, Stockport was the scene of some fighting; it was taken from the Parliamentarians by Rupert in 1644, but retaken by Lesley in the following year. In 1745, the town was occupied by Prince Charles Edward. At this place the Manchester Blanketeers (which see) were dispersed, March 11, 1817.

Stock-purse. In the British service, is a certain saving which is made in a corps for regimental purposes.

Stockton-on-Tees. A town of England, in Durham, on the left bank of the Tees, 11 miles east-northeast of Darlington. It was plundered by the Scotch in 1325;

taken for the Parliament in 1644, and totally destroyed by the Roundheads in 1652.

Stoeni. A Ligurian people in the Maritime Alps, conquered by Q. Marcius Rex, 118 B.C., before he founded the colony of Narbo Martius.

Stoke, East. A parish of England, county of Notts, 4 miles southwest of Newark. Near here, on June 16, 1487, the adherents of Lambert Simnel, who personated Edward, earl of Warwick, and claimed the crown, were defeated by Henry VII. John de la Pole, the earl of Lincoln, and most of the leaders were slain; and Simnel, whose life was spared, was afterwards employed in the king's household.

Stone Arabia. See PALATINE.

Stone Fougass. See FOUGASS, STONE.

Stone River, Battle of. See MURFREESBORO'.

Stone-bow. A cross-bow formerly used or designed for throwing stones.

Stone-mortar. Was a mortar which was used to throw stones a short distance, from 150 to 250 yards; and also 6-pounder shells from 50 to 150 yards. The stones which were used in this mortar were put into a basket fitted to the bore, and placed on a wooden bottom which covers the mouth of the chamber.

Stony Point. A village in Orange Co., N. Y., on the west bank of the Hudson River, at the head of Haverstraw Bay, 42 miles north of New York. The capture of the fort at this place by Gen. Wayne, on July 16, 1779, is justly considered one of the most brilliant exploits performed during the Revolutionary war. The fortifications were destroyed and abandoned on July 18.

Stoppage of Pay. Where pay is stopped on account of arrears to the United States, the party whose pay is stopped may demand a suit, and the agent of the treasury is required to institute a suit within sixty days thereafter.

Stoppages. In the British service, are the deductions from a soldier's pay, the better to provide him with necessaries, etc.; also stoppage for the subsistence of the sick.

Store-keeper, Military. An officer specially appointed for the care of military stores. The law discontinues this grade in the U. S. service by casualties.

Stores, Military. The arms, ammunition, clothing, provisions, etc., pertaining to an army, is so called. In the United States all public stores taken in the enemy's camp, towns, forts, or magazines, shall be secured for the service of the United States; for the neglect of which the commanding officer is to be answerable.

Storm. A violent assault on a fortified place; a furious attempt of troops to enter and take a fortified place by scaling the walls, forcing the gates, and the like. Also, to assault; to attack and attempt to take by scaling the walls, forcing gates or breaches, and the like; as, to storm a fortified town.

Storming-party. A party assigned to the

duty of first entering the breach in storming a fortress.

Stourton, or Stour Head. A village of England, in Wiltshire, about 23 miles west from Salisbury. The Britons were defeated here in 658 by the Saxons, and in 1010 and 1025 the Danes also encountered the Saxons near this place.

Stragglers. Are individuals who wander from the line of march; and it is the duty of the rear-guard to pick up all such stragglers.

Strains. See **ORDNANCE, STRAINS UPON.**

Stralsund. A fortified town and seaport of Prussia, province of Pomerania, on a narrow strait called Strela Sunda, which divides the mainland from the island of Rügen. It was founded in 1209 by Prince Jaromar of Rügen, became a member of the Hanse, and rapidly rose into importance. During the Thirty Years' War, it was unsuccessfully besieged (1628) by Wallenstein; and after being, with some alternations of fortune, in the possession of Sweden for about 200 years, it finally passed to Prussia in 1815.

Strappado. A punishment formerly inflicted upon foreign soldiers by hoisting them up with their arms tied behind them, and then suddenly letting them down within a certain distance of the earth.

Strapped Ammunition. See **ORDNANCE, AMMUNITION FOR.**

Straps. Are decorations made of worsted, silk, gold, or silver, and worn upon the shoulders, without epaulette.

Strasbourg, or Strassburg. Formerly a fortified town of France, and capital of the department of Bas-Rhin, but in 1871 ceded to Germany, and capital of the province of Alsace, not far from the left bank of the Rhine, 812 miles east from Paris by railway. During the Middle Ages it was subject to the German emperors, and was the capital of Alsace, but along with that province it was ceded to Louis XIV. in 1681. Subsequently its defenses were greatly improved under the direction of Vauban. Strasbourg was invested by the Germans, principally from Baden, during the Franco-Prussian war, August 10, 1870. Gen. von Werder assumed the command of the besiegers, and the bombardment began August 14, and a vigorous sally was repulsed August 16. Gen. Uhrich, the commander, declared that he would not surrender except upon a heap of ashes. After a heroic resistance, and when a breach had been made and an assault was impending, notice was given September 27, and the place surrendered at 2 A.M., September 28; at 8 A.M. 17,160 men and 400 officers laid down their arms. The German loss was said to be 906 men, of whom 43 were officers. The Germans entered Strasbourg, September 30, the anniversary of its surrender to the French in 1681 by a surprise. Uhrich received the grand cross of the Legion of Honor, October, 1870. About 400 houses and the invaluable library were

destroyed, the cathedral injured, and 8000 persons rendered homeless.

Stratagem. In war, is any scheme or plan for the deceiving and surprising an army, or any body of men.

Stratarithmetry. The art of drawing up an army, or any given number of men, in any geometrical figure, or of estimating or expressing the number of men in such a figure.

Strategetics. The science of military movements; generalship.

Strategic, or Strategical. Pertaining to strategy; effected by artifice.

Strategic Point. Any point or region in the theatre of warlike operations which affords to its possessor an advantage over his opponent.

Strategical Fronts. The portion of the theatre of war in front of any position occupied by an army as it advances, is termed the *front of operations*. That part which is directly in front of an army, or which can be reached in two or three days, forms simply a *front*. When the whole extent lying between the two hostile armies is considered, the term *strategical front* is applied.

Strategical Lines. See **LINES, STRATEGICAL.**

Strategical Points. Every point of the theatre of war, the possession of which is of great importance to an army in its military operations, is a *strategical point*. These are points which an army acting on the offensive strives to gain and the army on the defensive strives to retain.

Strategist. One skilled in strategy, or the science of directing great military movements.

Strategos (invented by Lieut. C. A. L. Totten, 4th U.S. Artillery). The American "game of war," which takes its name from the Greek word *strategos*, the title of an Athenian general officer, derived in turn from *stratos*, "an army," and *ago*, "I lead;" the secondary meaning of this term being a board or council of ten Athenians chosen annually to conduct the war department at home. The game of *strategos* is divided into six separate ones, or studies, of gradually increasing importance, and is far more comprehensive than the foreign war games, which have little in common with the subaltern and the student, and are so complicated as to excite interest only among the most profound and advanced scholars of military science. The six parts of *strategos* are: (1) The "minor tactical game," which embraces all the details of the tactics of each of the three arms. (2) "Grand tactics," embracing the topographical and strategical game, for the general elucidation of the grand principles of this branch of military science. (3) The "historical game," for the study of historical battles and campaigns. (4) "Text-book illustration." (5) A "battle game," based upon military principles and precepts, which is calculated to instruct as well as interest without fatiguing that

large class of students whose patience would not stand the close application required in a more advanced game. (6) The "advanced game," which affords to the professional military student every opportunity for pursuing studies commenced in more elementary fields to their legitimate termination. It is only in the "advanced game" that *strategos* solves the same problem attempted by the Germans in *kriegspiel*, and other military nations in various alterations and improvements upon the great original. War games are by no means of such modern invention as may at first appear; chess is a very ancient "battle game," and checkers one in which decisive concentration plays a most important part. During the last century two games, the *jeu de la guerre* and the *jeu de la fortification*, appeared in France and were played with cards. These games differ, however, entirely from the modern ones. *Kriegspiel*, the father of modern war games, was the invention of a civilian, Herr von Reitzwitz, the details of which his son, a Prussian artillery officer, carefully improved. It rapidly grew into military favor, and since 1824, when it was first mentioned by officers of note, has undergone many modifications except as to its underlying principles. Von Moltke himself some twenty years ago was the president of a society whose special object was to play this game, and the great skill of Prussian officers and their success in their late wars is in no small degree to be attributed to this game, familiarity with which has become a sort of necessary step in advancement in the Prussian army. The American game possesses all the valuable features of *kriegspiel*, and some noticeable improvements thereon as to method, men, tables, etc., while it possesses the peculiar advantages of having elementary games of special interest to all classes of military men. The cost of this game is about \$50.

Strategus (Strategos). Any Athenian general officer was so called.

Strategy. Is defined by military writers to be the science of manœuvring an army out of fire of the enemy, as tactics is the art of managing it in battle or under fire. Strategy is the greater science, as including all those vast combinations which lead to the subsequent available displays of tactics.

A movement of the army is said to be *strategical* when by its means there are concentrated at a given point troops superior in numbers to those of the enemy; or, at this point, there is gained a position by which the enemy's communications with his base are cut or threatened while those of the army are secure; or, a position is gained by which the forces of the enemy are separated, or are prevented from acting in concert. Strategical operations are directed to attain one or more of these objects; and the line followed by an army in an operation of this kind is called a *strategical line*. The area of country or territory in any part of which

the hostile forces can come into collision is termed the *theatre of war*.

There may be employed in a given theatre of war several armies or only one. If there are several armies, but each acting independently of the others, or if there is only one, the particular portion of the territory in which each act is termed the *theatre of operations* for that army.

A theatre of operations of an army may be defined to be all the territory it may desire to invade, and all that it may have to defend. Where several armies are employed, acting in concert, the theatre of operations of each army depends upon the movements of the other armies, and the theatres of operations of each army in this case are usually designated as *zones of operations*; although this term is also applied to those three divisions of a theatre of operations lying directly in advance of the centre and flanks of a front of operations. Whatever is true for a theatre of operations of an army acting alone is equally true for the theatre of operations of several armies acting separately, and is also applicable to the whole theatre of war.

To make the above statements definite, suppose a single army acting in an independent theatre of operations. A general with such an army under his command proposing an advance towards the enemy will have three things to consider, viz.: (1) The place from which the army is to start; (2) The point to which the army is to go; (3) The roads or routes by which the army is to move in order to reach this point. The first, or place of starting, is termed the *base of operations*. The second, the point to be reached, is called the *objective-point*, or simply the *objective*. The third, the roads or routes used by the army in reaching the objective-point, is termed the *line of operations*. The portion of the theatre of operations occupied by the army as it advances is known as the *front of operations*.

Stratton-Hill, Battle of. In Cornwall, England, May 18, 1648, between the royal army under Sir Ralph Hopton, and the forces of the Parliament under the Earl of Stamford. The victory was gained over the Parliamentarians, who lost heavily in killed and wounded.

Strelitz, or properly *Streltzi* ("arque-buzziers"). The ancient Russian militia-guard, first raised by Ivan Vatsilevitch the Terrible, in the second half of the 16th century. At that time and for long afterwards, they were the only standing army in Russia, and at times amounted to between 40,000 and 50,000 men. They were located at Moscow in time of peace, in a quarter of the Capitol which was set apart for them, and being the bravest and most trustworthy troops in the army, were made objects of special favor and distinctions. But like all such petted corps, the Roman *Prætorians*, the Turkish Janissaries, and the Egyptian Mamelukes, their general turbulence, frequent revolts against the government (no-

tably during the Demetrian insurrections), and incessant conspiracies, rendered them more formidable to the Russian government than to external enemies. The Strelitz having, at the instigation of the Grand Duchess Sophia and the chiefs of the Old Muscovite party, revolted against Peter the Great, that iron-handed ruler caused them to be decimated (1698) in the great square of Moscow, and the remainder to be banished to Astrakhan. The feeble remnant still manifesting their characteristic turbulence and disloyalty, Peter exterminated them almost completely in 1705. Few Russian families at present can claim kindred with the old Strelitz, but to this the family of Orloff forms a prominent exception, being descended from a Strelitz who was pardoned by Peter the Great while the axe was being raised over him.

Strength. This word may be variously understood in military matters. It means fortification; strongholds, etc. It likewise signifies armament; power; force. In all returns which are made of corps, *strength* implies the number of men that are borne upon the establishment, in contradistinction to *effective force*, which means the number fit for service.

Stretch. A litter or frame for carrying sick, wounded, or dead persons.

Strict. Exact, severe, rigorous; the contrary to mild, indulgent. Hence, a strict officer. It is sometimes used in a bad sense, to signify a petulant, troublesome commander.

Striegau. A town of Prussia in Silesia, 29 miles southwest from Breslau. The Austrians were defeated by the Prussians under Frederick the Great near this town in 1745.

Strife. Contention in battle; contest; struggle for victory; quarrel of war.

Strike. This word is variously used in military phraseology; as, to *strike a tent*, is to loosen the cords of a tent which has been regularly pitched, and to have it ready, in a few minutes, to throw upon a baggage-wagon. To *strike terror into an enemy*, is to cause alarm and apprehension in him; to make him dread the effects of superior skill and valor. To *strike a blow*, to make some decisive effort.

Stripes. The chevrons on the coats of non-commissioned officers are sometimes so called.

Strong. Well fortified; able to sustain attacks; not easily subdued or taken; as, a strong fortress or town. Having great military or naval force; powerful; as, a strong army or fleet; a nation strong at sea.

Stronghold. A fastness; a fort or fortress; a fortified place; a place of security.

Struggle. To. To make extraordinary exertion in direct contest with an enemy, or against superior forces.

Stuhlweissenburg. A town of Austria, in Hungary, 87 miles southwest from Budapesth. It was besieged and taken from the

Turks by the Austrians under the Duke of Mercoeur, in September, 1801; was besieged and captured by the Turks in August, 1802; and was besieged and taken by assault by the Austrians on September 6, 1888.

Stuhm. A town of West Prussia, 13 miles north-northeast of Marienwerder. Here a battle was fought between the Swedes under Gustavus Adolphus and the Poles under Gen. Koniecpolski, June 17, 1629.

Stuttgart, or Stutgard. The capital of Würtemberg, Germany, 88 miles east-southeast from Carlsruhe. During the wars of Louis XIV., Stuttgart was thrice taken; and again in 1796, 1800, and 1801.

Stylet. A small poniard or dagger; a stiletto.

Styra (now Stura). A town in Eubœa, on the south west coast, nearly opposite Marathon in Attica. The inhabitants took an active part in the Persian war, and fought at Artemisium, Salamis, and Plateæ. They afterwards became subject to the Athenians. The town was destroyed in the Lamian war by the Athenian general Phœdrus, and its territory was annexed to Eretia.

Suabia, Swabia, or Suevia (Ger. Schwaben). An ancient duchy in the southwest of Germany, so named from a horde of Suevi, who spread over it in the 5th century; was a great duchy of the Frank empire till the 8th century. In 918, it was acknowledged a ducal fief of the empire; and after changing hands several times, it was bestowed upon Count Frederick of Hohenstaufen, the founder of the illustrious house of that name, also known as the house of Suabia. Under the rule of this prince, Suabia became the most rich, civilized, and powerful country of Germany; but the wars of the Guelphs and Ghibellines, and the quarrel with the French respecting Naples, put an end to the dynasty in 1268. The ducal vassals of Suabia rendered themselves almost independent, and professed to acknowledge no lord but the emperor. During these dissensions arose the lordships of Würtemberg and Baden, with numerous lesser states, holding direct of the crown, and opposed to them the cities, which strove also for an equal independence, and obtained, in 1347, great additional privileges. A number of them united to make common cause against the neighboring feudal lords in 1376 (known as the "First Suabian League"); an opposite league was formed between Würtemberg, Baden, and seventeen towns in 1406, called the "League of Marbach"; and both took part in the war of Swiss independence, the former in support of the Swiss, the latter of the Austrians. At last the towns, which had been increasing in power, decided at Ulm, in 1449, to form a standing army, and a permanent military commission, for the forcible preservation, if necessary, of peace and order; and the Count of Würtemberg, the most powerful of the opposite party, having joined them, was appointed military chief of the league, which ultimately grew up into the "Great Suabian

League," which effectively repressed feudal quarrels. In 1512, Suabia became one of the ten circles into which Germany was now divided, received its complete organization in 1563, and retained it almost without change till the dissolution of the empire in 1806. But during this period, the wars of the towns with Würtemberg, the Peasants' war, of which Suabia was one of the foci, the Thirty Years' War, and those between France and the empire, destroyed the democratic constitution of the towns, and with it their energy, and then their prosperity disappeared, leaving now no relic which could suggest their former great importance.

Subadar. A native officer in a native East Indian infantry regiment holding a rank corresponding to that of captain.

Subadar-Major. In the East Indies, is the native commandant of a native infantry regiment.

Subaltern. A commissioned officer below the rank of captain. But strictly speaking every officer is a subaltern to the grades above him, as the captain is subaltern to the major, and so upward.

Sub-Brigadier. An officer in the Horse Guards who ranks as cornet.

Subdivision. The parts of a regiment on parade distinguished by a second division. Thus, a company divided forms two subdivisions.

Subdue. To bring under; to conquer by force or the exertion of superior power, and bring into permanent subjection; to reduce under dominion. To overpower so as to disable from further resistance; to crush.

Subdur. In the East Indies signifies a chief.

Subjugate. To subdue and bring under the yoke of power or dominion; to conquer by force, and compel to submit to the government or absolute control of another.

Sub-Lieutenant. In the British service, is the lowest commissioned rank in infantry and cavalry.

Subordinary, or Subordinate Ordinary. In heraldry, a name given to a certain class of charges mostly formed of straight or curved lines. Heraldry vary a little in their enumeration, but the following are generally held to come within this category: the Bordure, the Orle, the Tressure, the Flanche, the Pile, the Pall, the Quarter, the Canton, the Gyron, the Fret, the Inescutcheon, the Lozenge, the Fusil, and the Mascle. Some heraldic writers account the Pile an ordinary, and the diminutives of the ordinaries are sometimes ranked as subordinaries.

Subordination. A perfect submission to the orders of superiors; a perfect dependence, regulated by the rights and duties of every military man, from the soldier to the general. Subordination should show the spirit of the chief in all the members; and this single idea, which is manifest to the dullest apprehension, suffices to show its importance. Without subordination it is impossible that a corps can support itself; that its motions

can be directed, order established, or the service carried on. In effect, it is subordination that gives a soul and harmony to the service; it adds strength to authority, and merit to obedience; and while it secures the efficacy of command, reflects honor upon its execution. It is subordination which prevents every disorder, and procures every advantage to an army.

Subsidy. A stipulated sum of money, paid by one prince to another in pursuance of a treaty of alliance for offensive or defensive war. *Subsidiary troops*, are the troops of a nation assisting those of another, for a given sum or subsidy.

Subsist. To support with provisions; to feed; to maintain.

Subsistence. This word may be divided into two sorts, namely, that species of subsistence which is found in an adjacent country, such as forage, and frequently corn; and that which is provided at a distance, and regularly supplied by means of a well-conducted commissary. The latter consists chiefly of meat, bread, etc. To these may be added wood or coals, and straw; which are always wanted in an army.

Subsistence Department. A department which provides subsistence stores for the army, either by contract or purchase. The U. S. subsistence department consists of 1 brigadier-general, 2 colonels, 3 lieutenant-colonels, 8 majors, and 12 captains. See COMMISSARIAT.

Substitute, Military. In nations where conscription is resorted to for the supply of soldiers for the army, the lot often falls on those unwilling to serve in person. In such a case, the state agrees to accept the services of a substitute,—that is, of a person of equally good physique. Unless the levy be very extensive, or the term of military service very long, substitutes are readily found among military men who have already served their prescribed period. Of course, the substitute must be paid for the risk he runs. His price depends, like all other salable articles, on the demand and supply.

Succeedant. In heraldry, succeeding one another, following.

Success of Arms. The good luck, or fortune, which attends military operations, and upon which the fate of a nation frequently depends. Success is indispensable to the reputation of a general. It often hallows rash and unauthorized measures.

Succession of Rank. Relative gradation according to the dates of commission.

Succession Wars. These wars were of frequent occurrence in Europe, between the middle of the 17th and the middle of the 18th centuries, on the occasion of the failure of a sovereign house. The most important of these was that of the Orleans succession to the Palatinate (1686-97), closed by the peace of Ryswick; of the Spanish succession (1700-13), which was distinguished by the achievements of the Duke of Marlborough and the Earl of Peterborough,

and their unprofitable results, arose on the question whether an Austrian prince or a French prince should succeed to the throne of Spain; of the Polish succession (1788-88), closed by the peace of Vienna; of the Austrian succession (1740-48); and of the Bavarian succession (1777-79), called, in ridicule, the Potato war. Of these, the second and fourth were by far the most important.

Successive Pontons. See **PONTONS**.

Sudbury. A town in Middlesex Co., Mass., 20 miles west by north from Boston. A battle was fought here on April 18, 1776, in which Capt. S. Wadsworth and two-thirds of his men were killed by the Indians, in King Philip's war.

Suessiones, or Suessones. A powerful people in Gallia Belgica, who were reckoned the bravest of all the Belgic Gauls after the Bellovaci, and who could bring 50,000 men into the field in Cæsar's time. Their king Divitiacus, shortly before Cæsar's arrival in the country, was reckoned the most powerful chief in all Gaul, and had extended his sovereignty even over Britain. The Suessiones dwelt in an extensive and fertile country east of the Bellovaci, south of the Veromandui, and west of the Remi. They possessed twelve towns, of which the capital was Noviodunum, subsequently Augusta Suessonum, or Suessones.

Suevi. One of the greatest and most powerful races of Germany, or, more properly speaking, the collective name of a great number of German tribes, who were grouped together on account of their migratory mode of life, and spoken of in opposition to the more settled tribes, who went under the general name of Ingvæones. The Suevi are described by all the ancient writers as occupying the greater half of all Germany; but the accounts vary respecting the part of the country which they inhabited. At a later time the collective name of the Suevi gradually disappeared. In the second half of the 2d century, however, we again find a people called Suevi, dwelling between the mouth of the Main and the Black Forest, whose name is still preserved in the modern Suabia; but this people was only a body of bold adventurers from various German tribes, who assumed the celebrated name of the Suevi in consequence of their not possessing any distinguishing appellation.

Suisses (Fr.). The Swiss soldiers who were in the pay of France previous to August 10, 1792, were generally so called. It was also a general term to signify stipendiary troops.

Suliot. A people in and around the valley of Acheron, the southern corner of the pashalic of Janina (*Epirus*), in Turkey in Europe, are a mixed race, being partly of Hellenic and partly of Albanian origin. They are the descendants of a number of families who fled from the Turkish oppressors to the mountains of Suli (whence they derive their name) during the 17th century. In this obscure corner of the Turkish em-

pire they prospered, and towards the close of the 18th century numbered 560 families. For about fifteen years they heroically resisted the encroachments of Ali Pasha of Janina upon their independence, the very women taking part in the strife. Vanquished in 1808, they retreated to Parga, and afterwards to the Ionian Islands, where they remained till 1820, when their old oppressor, Ali Pasha, finding himself hard pressed by the Turks, invoked their aid. Eager to return to their cherished home, they accepted his terms, and under Marcos Bozzaris maintained a long and desperate conflict with the Turks, but were ultimately forced again to flee from their country, and take refuge to the number of 8000 in Cephalonia, though a large remnant preferred to skulk in the neighboring mountains. Though, after this, they took an active and glorious part in the war of Greek independence, their country was not included by the treaty of 1829 within the Greek boundary-line, but many of them, as Bozzaris (son of Marcos) and Tzavellas, have since been raised to important political offices in the new kingdom of Greece.

Sulphur. A simple mineral substance, of a yellow color, brittle, insoluble in water, easily fusible and inflammable;—called also *brimstone*,—that is, *burn-stone*, from its great combustibility. It burns with a blue flame and a peculiar suffocating odor. It is an ingredient of gunpowder (which see).

Sultan, or Sultaun. An Arabic word signifying the "mighty man," and evidently closely connected with the Hebrew word *shalal*, "to rule," is in the East an ordinary title of Mohammedan princes. It is given, *par excellence*, to the supreme head of the Ottoman empire. It is applied in Egypt to the ruler of that country, and is also retained by the heir of the former reigning line of the Crim-Tartars. *Sultana* is the title of the wife of a sultan.

Sumatra. The most westerly of the Sunda Islands, lies southwest of the Malay peninsula, from which it is separated by the Strait of Malacca. When the Portuguese landed here in 1509, they found that the ancient Malay kingdom of Menangkabau had been dissolved; but there was a powerful monarch ruling over Acheen, who endeavored to exclude the strangers from his country. In 1576, the Portuguese shipping in the harbor of Acheen was destroyed by the natives, and in 1582, an attempt which they made to gain possession of the town proved quite unsuccessful. In 1600, the Dutch established a factory at Pulo Chinko, on the west coast. The kingdom of Acheen had by this time begun to decline in power, being distracted by internal wars and discords: The Dutch rapidly increased the number of their factories and settlements, founding one at Padang in 1649, at Palembang in 1664. The English followed the Dutch in this island, and founded a colony at Bencoolen in 1685. In 1811, the Dutch settlements in the East Indies fell into the hands of the British, but

were restored to the Dutch by the peace of 1816. A singular war which took place in Sumatra led to a material extension of the Dutch possession. It was occasioned by a religious sect called Padries. About 1816 a society of this sect was formed for the purpose of spreading their doctrines and practices by force; and this speedily roused resistance and opposition. The Malays and Battas made common cause against the Padries, and for a long time a fierce struggle was carried on, which devastated Menangkabau and the neighboring regions. At length, with the assistance of the Dutch, the sect was entirely put down. The indirect results of this war were the annexation of Menangkabau to the Dutch possessions in 1835, and the opening up to them of the Batta country, from which foreigners had previously been excluded. In 1866, an expedition was sent to force the king of Asahan, one of the small states on the northeast coast, to submit to the Dutch authority. In 1871 these settlements were sold to Great Britain.

Summon. To call upon to surrender; as, to summon a fort.

Summons. A call or invitation to surrender.

Sumpit. An arrow blown from the *sumpitan* in Borneo. The sumpitan is about 7 feet long; the arrow has been driven with some force at 180 yards. Some suppose it to be poison.

Sumter, Fort. See FORT SUMTER.

Suncion, Treaty of. Between Gen. Urquiza, director of the Argentine Confederation, and C. A. Lopez, president of the republic of Paraguay, recognizing the independence of Paraguay, July 15, 1852.

Superannuated. Incapacitated for service, either from age or infirmity, and placed on a pension.

Supercharge. In heraldry, a bearing or figure placed upon another.

Superintendent. One who has the oversight and charge of something, with the power of direction; as the superintendent of recruiting service; superintendent of national cemeteries, etc.

Superior Officer. Any officer of higher rank, or who has priority in the same rank, by the date of his commission, etc.

Superior Slope. The upper surface of a parapet.

Supernumerary. Officers or men in excess of the establishment, but borne on the rolls of the corps till absorbed. *Supernumeraries*, or *supernumerary rank*, also signifies the officers and non-commissioned officers in the infantry, cavalry, etc., who are not included among rank and file, and stand in the third rank on parade, when the troops are drawn up in double ranks.

Supersede. Is to deprive an officer of rank and pay for any offense or neglect, or to place one officer over the head of another, who may or may not be more deserving.

Supply. Relief of want; making up deficiencies. A fresh supply of troops, ammunition, etc. *To supply*, to make up deficiencies. To aid; to assist; to relieve with something wanted. To fill any room made vacant. Thus, covering sergeants supply the places of officers when they step out of the ranks, or are killed in action.

Support. To aid, to assist; it likewise signifies to preserve untarnished; as, to support the ancient character of a corps. *Well supported*, is well aided or assisted. It likewise signifies well kept up; as, a well supported fire from the batteries; a well supported fire of musketry.

Support Arms. Is to hold the musket vertically on the left shoulder, supported by having the hammer rest on the left forearm, which is passed across the breast.

Supporters. In heraldry, figures placed on each side of an armorial shield, as it were to support it. They seem to have been, in their origin, a purely decorative invention of mediæval seal-engravers, often, however, bearing allusion to the arms or descent of the bearer; but in the course of time their use came to be regulated by authority, and they were considered indicative that the bearer was the head of a family of eminence or distinction. The most usual supporters are animals, real or fabulous; but men in armor are also frequent, and savages, or naked men, often represented with clubs, and wreathed about the head and middle. There are occasional instances of inanimate supporters. On early seals, a single supporter is not unfrequent, and instances are particularly common of the escutcheon being placed on the breast of an eagle displayed. The common rule, however, has been to have a supporter on each side of the shield. The dexter supporter is very often repeated on the sinister side; but the two supporters are in many cases different; when the bearer represents two different families, it is not unusual for a supporter to be adopted from the achievement of each.

Suppress. To overpower and crush; to subdue; to put down; to quell; to destroy; as, the troops suppressed the rebellion.

Surat. A large but declining city of British India, 160 miles north of the city of Bombay, on the south shore of the Tapti, and 8 miles from its mouth in the Gulf of Cambay. Surat was sacked in 1512 by the Portuguese soon after their arrival in India. In 1612 an English force arrived here in two vessels, under the command of Capt. Best, who defeated the Portuguese, and obtained a *firmān* from the Mogul emperor, authorizing the residence of a British minister, and established a factory. An attack of the Mahratta chief Sivsajee on the British factory was defeated by Sir George Oxenden, 1684. The English were again attacked in 1670 and 1702, and often subsequently. The East India Company, in 1759, fitted out an armament which dispossessed the admiral of the castle (the Great Mogul had here an officer

who was styled his admiral); and, soon after, the possession of this castle was confirmed to them by the court of Delhi. Surat was vested in the British by treaty in 1800 and 1808.

Surcingle. A belt, band, or girth, which passes over a saddle, or over anything laid on a horse's back, to bind it fast.

Surcoat. A short coat worn over the other garments; especially the long and flowing drapery of knights, anterior to the introduction of plate-armor, and which was frequently emblazoned with the arms of a family.

Surface. In fortification, that part of the side which is terminated by the flank prolonged, and the angle of the nearest bastion; the double of this line with the curtain is equal to the exterior side.

Surgeon. A staff-officer of the medical department. He has the rank of major, but "shall not in virtue of such rank be entitled to command in the line or other staff departments of the army."

Surgeon-General. The chief of the medical department, with the rank of brigadier-general, but subject to the same restriction of command as other officers of the medical department.

Surgeons, Acting Assistant- (Contract). In the U. S. army, are physicians employed from civil life, at a certain compensation, to perform the duties required of commissioned medical officers, when the number of the latter is insufficient. While they have no rank they still have the allowances of an assistant-surgeon (first lieutenant). A physician so employed cannot displace a commissioned officer by choice of quarters; but to obviate being displaced by a commissioned officer, the commanding officer of a post may assign him an allowance of first lieutenant's quarters near the hospital, under the provisions authorizing the commanding officer to assign quarters to officers convenient to their troops. Acting assistant-surgeons are entitled to the same protection and respectful conduct from enlisted men as commissioned officers are, so far as relates to their duties as surgeons. A contract physician in the army is regarded as a "quasi-officer."

Surgery, Military. Restricted to its rigorous signification, military surgery is the surgical practice in armies; but in its broad and ordinary acceptation embraces many other branches of art comprehending the practice of medicine, sanitary precautions, hospital administration, ambulances, etc. The military surgeon must not only be a skillful physician and surgeon, but he must have a constitution sufficiently strong to resist the fatigues of war, and all inclemencies of weather; a solid judgment and a generous activity in giving prompt assistance to the wounded without distinction of rank or grade, and without even excluding enemies. He must have the courage to face dangers without the power, in all cases, of combating them; he must have great coolness in

order to act and operate in the most difficult positions, whether amidst the movement of troops, the shock of arms, the cries of the wounded when crowded together, in a charge, in a retreat, in intrenchments, under the ramparts of a besieged place, or at a breach. He must have inventive ingenuity which will supply the wants of the wounded in extreme cases, and a compassionate heart, with strength of will which will inspire confidence in those with whom he is brought so closely in contact. The military surgeon, with his flying ambulance, throws himself into the field of battle, through the mêlée, under the fire of the enemy, runs the risk of being taken prisoner, being wounded, or being killed, and is worthy of all the honors that should be bestowed on bravery and skill in the performance of his high functions. Additional grades, as hospital-surgeons, surgeons of divisions, surgeons-in-chief, and inspector-generals of hospitals, etc., are required for every army in the field.

Surinam, or Dutch Guiana. A Dutch colony in South America, situated between English and French Guiana. The factories established here by the English in 1640, were occupied by the Portuguese in 1643; by the Dutch, 1654; captured by the English in 1804; and restored to the Dutch in 1814.

Surmounted. In heraldry, a term used to indicate that one charge is to be placed over another of different color or metal, which may respectively be blazoned: *sable*, a pile argent surmounted by a chevron gules; and, *argent*, a cross gules surmounted by another or.

Surprise. In war, to fall on an enemy unexpectedly, in marching through narrow and difficult passes, when one part of an army has passed, and is not able to come at once to the succor of the other; as in the passage of woods, rivers, inclosures, etc. A place is surprised by drains, casements, or the issues of rivers or canals; by encumbering the bridge or gate, or by wagons meeting and stopping each other; or by sending soldiers into the place, under pretense of being deserters, who, on entering, *surprise* the guard, being sustained by troops at hand in ambush, to whom they give entrance, and thereby seize the place. Military history abounds with instances of successful surprises.

Surrender. To lay down your arms, and give yourself up as a prisoner of war. Also, the act of giving up, as the surrender of a town or garrison.

Surrey. One of the smallest of the English counties, has the Thames for its northern boundary, Berkshire and Hampshire on the west, Sussex on the south, and Kent on the east. Before the Roman era, Surrey formed a portion of the dominions of a Celtic tribe, named by Ptolemy the *Regni*, and after the Roman conquest was merged into the province of Britannia Prima, though, for many years, it retained its native princes, or *subreguli*. Eventually it was swallowed

up in the territory of the South Saxons, and reduced by Kenulf, king of Wessex, about 760, into that progressive kingdom which Alfred brought into constitutional harmony and national completeness. From the period of the Norman conquest, Surrey can claim no separate annals. At Kingston, Surrey, in 1642, took place the first military movement of the great civil war; a body of royalists unsuccessfully attempting to seize upon its magazine of arms. And there, on July 7, 1648, Lord Francis Villiers (Dryden's "Zimri"), met his death in the skirmish which closed the famous struggle.

Surround. In sieges, to invest; in tactics, to outflank and cut off the means of retreating.

Surrounded. Inclosed; invested. A town is said to be surrounded when its principal outlets are blocked up; and an army, when its flanks are turned, and its retreat cut off.

Surtout (*Fr.*). In fortification, is the elevation of the parapet of a work at the angles to protect from enfilade fire.

Survey, Boards of. See **BOARDS OF SURVEY.**

Susa (in the Old Testament *Shushan*; ruins at *Ssus*). The winter residence of the Persian kings, stood in the district Cissia of the province of Susiana, on the eastern bank of the river Choaspes. It was conquered by Antigonus in 315 B.C. It was once more attacked by Molo in his rebellion against Antiochus the Great; and during the Arabian conquest of Persia it held out bravely for a long time, defended by Hormuzan.

Suspend. To delay, to protract; hence, to suspend hostilities. It is likewise used to express the act of temporarily depriving an officer of rank and pay, in consequence of some offense. See **APPENDIX, ARTICLES OF WAR, 101.**

Suspension of Arms. A short truce which contending parties agree upon, in order to bury their dead without danger or molestation, to wait for succors, or to receive instructions from a superior authority. *Suspension of hostilities*, to cease attacking one another.

Sussex. A maritime county in the south of England. Aella and his sons were the first Saxons who landed on the Sussex coast, 477. They assaulted and captured Wittering, near Chichester, spreading afterwards through the vast *Andredaleas* with fire and sword, and finally establishing the South-Sexe, or Sussex kingdom. The sea-board of Sussex suffered terribly from the ravages of the Danish jarls. Within its limits was fought (October 14, 1066) the memorable battle which overthrew the Saxon dynasty, and eventually resulted in that union of Saxon solidity and Norman enterprise now recognized as distinctive of the English character. See **LEWES** for important battle in 1264. The French fleet, under D'Annebaut, made an attack on Brighton in 1546, and landed a body of troops, who were stoutly resisted by the natives, and com-

pelled to retire. In 1648, the Parliamentarian forces, under Sir William Waller, besieged Chichester, which after ten days surrendered. The same leader, later in the year, beleaguered Arundel Castle for seventeen days, and reduced it to a heap of ruins. For naval combat off the Sussex coast, see **BEACHY HEAD.**

Sustain. To sustain is to aid, succor, or support, any body of men in action or defense.

Sutherland. A county in the extreme north of Scotland. Sutherland received its name from the Northmen, who frequently descended upon and pillaged it prior to the 12th century, and called it the Southern Land, as being the limit on the south of their settlements.

Sutler. A camp-follower, who sells drink and provisions to the troops. See **CANTEEN**, and **POST-TRADER.**

Swad, or Swadkin. A newly-raised soldier.

Swaddie. A discharged soldier.

Swallow's-tail. In fortification, an out-work, differing from a single tenaille, as its sides are not parallel, like those of a tenaille; but if prolonged, would meet and form an angle on the middle of the curtain; and its head, or front, composed of faces, forming a re-entering angle.

Sway. The swing or sweep of a weapon. "To strike with huge two-handed sway."

Sweaborg, or Sveaborg. A great Russian fortress and seaport, in Finland, government of Viborg, sometimes called "the Gibraltar of the North." In 1789 it was taken from Sweden by Russia. During the Crimean war it was bombarded by the Anglo-French fleet in the Baltic (on August 9-10, 1855). Twenty-one mortar-vessels were towed to within about 2 miles (8400 metres) of the centre of the Russian arsenal, while the gunboats of the squadron, keeping in constant motion, approached to a distance of 2000 or 3000 metres. The fire was maintained forty-five hours, during which 4150 projectiles (2828 of which were mortar-shells) were thrown into the place, killing and wounding 2000 men, and destroying magazines, supplies, and shipping.

Sweden. A kingdom in the north of Europe, and forming with Norway (with which it is now united under one monarchy), the whole of the peninsula known by the name of Scandinavia. The earliest traditions of Sweden, like those of most other countries, present only a mass of fables. The dawn of Swedish history (properly so called) now begins, and we find the Swedes constantly at war with their neighbors of Norway and Denmark, and busily engaged in piratical enterprises against the eastern shores of the Baltic. In 1155, Eric, surnamed the Saint, undertook a crusade against the pagan Finns, compelled them to submit, established Swedish settlements among them, and laid the foundation of the closer union of Finland with Sweden. Eric's

defeat and murder, in 1161, by the ambitious young Danish prince Magnus Henriksen, who had made an unprovoked attack upon the Swedish king, was the beginning of a long series of troubles, and during the following 200 years, one short and stormy reign was brought to a violent end by murder or civil war, only to be succeeded by another equally short and disturbed; until, at length, the throne was offered by the Swedish nobles to Margaret, queen of Denmark and Norway, who threw an army into Sweden, defeated the Swedish king, Albert of Mecklenburg, and by the union of Calmar, in 1397, brought Sweden under one joint sceptre with Denmark and Norway. Sweden emancipated itself from the union with Denmark in 1523. Gustavus I. (Gustaf Vasa) on his death, in 1560, left to his successor a hereditary and well-organized kingdom, a full exchequer, a standing army, and a well-appointed navy. John, brother of Eric XIV., ascended the throne in 1568, which he occupied for nearly a quarter of a century, dying in 1592, after a stormy reign, stained by the cruel murder of his unfortunate brother Eric, and distracted by the internal dissensions arising from his attempts to force Catholicism on the people, and the disastrous wars with the Danes, Poles, and Russians. John's son and successor, Sigismund, after a stormy reign of eight years, was compelled to resign the throne. The deposition of Sigismund gave rise to the Swedo-Polish war of succession, which continued from 1604 to 1660; and on the death of Charles IX. in 1611, his son and successor, the great Gustavus Adolphus, found himself involved in hostilities with Russia, Poland, and Denmark. With Charles XII. the male line of the Vasas expired, and his sister and her husband, Frederick of Hesse-Cassel, were called to the throne by election, but were the mere puppets of the nobles, whose rivalries and party dissensions plunged the country into calamitous wars and almost equally disastrous treaties of peace. Gustavus IV. lacked the ability to cope with the difficulties of the times, and after suffering in turn for his alliance with France, England, and Russia, was forcibly deposed in 1809, and his successor, Charles XIII., saw himself compelled at once to conclude a humiliating peace with Russia by a cession of nearly a fourth part of the Swedish territories, with 1,500,000 inhabitants; Gen. Bernadotte was elected to the rank of crown-prince, and he assumed the reins of the government, and by his steady support of the allies against the French emperor, secured to Sweden, at the congress of Vienna, the possession of Norway, when that country was separated from Denmark. Under the able administration of Bernadotte, who, in 1818, succeeded to the throne as Charles XIV., the united kingdoms of Sweden and Norway made great advances in material prosperity and political and intellectual progress.

Sweep. To clear or brush away; as, the cannon swept everything before it.

Swell of the Muzzle. In gunnery, is the largest part of the gun in front of the neck. See **ORDNANCE**, **CONSTRUCTION OF**, **MOLDING**.

Swiss Guards. See **GARDES SUISSES**.

Switzerland. A federal republic in Central Europe; bounded on the north by Baden, northeast by Würtemberg and Bavaria, east by the principality of Liechtenstein and the Tyrol, south by Piedmont and Savoy, and west and northwest by France. Switzerland was in Roman times inhabited by two races,—the Helvetii on the northwest, and the Rhetians on the southeast. When the invasions took place, the Burgundians settled in Western Switzerland, while the Alemanni took possession of the country east of the Aar. The Goths entered the country from Italy, and took possession of the country of the Rhetians. Switzerland in the early part of the Middle Ages formed part of the German empire, and feudalism sprang up in the Swiss highlands even more vigorously than elsewhere. During the 11th and 12th centuries, the greater part of Switzerland was ruled on behalf of the emperors by the lords of Zähringen, who did much to check civil wars. They, however, became extinct in 1218, and then the country was distracted by wars, which broke out among the leading families. The great towns united in self-defense, and many of them obtained imperial charters. Rudolph of Habsburg, who became emperor in 1273, favored the independence of the towns; but his son Albert I. took another course. He attacked the great towns, and was defeated. The leading men of the Forest Cantons met on the Rütli meadow, on November 7, 1307, and resolved to expel the Austrian bailiffs or landvögte. A war ensued which terminated in favor of the Swiss at Morgarten (which see) in 1315. Schwyz, Uri, and Unterwalden, with Lucerne, Zürich, Glarus, Zug, and Bern, eight cantons in all, in 1352, entered into a perpetual league, which was the foundation of the Swiss Confederation. Other wars with Austria followed, which terminated favorably for the confederates at Nafels (which see) and Sempach (which see). In 1415, the people of the cantons became the aggressors. They invaded Aargau and Thurgau, parts of the Austrian territory, and annexed them; three years later, they crossed the Alps, and annexed Ticino, and constituted all three subject states. The Swiss were next engaged in a struggle on the French frontier with Charles the Bold of Burgundy. They entered the field with 34,000 men, to oppose an army of 60,000, and yet they were successful, gaining the famous battles of Granson and Morat (see **MORAT**) in 1476. In 1499, the emperor Maximilian I. made a final attempt to bring Switzerland once more within the bounds of the empire. He sought to draw men and supplies from the inhabitants for his Turkish

war, but in vain. He was defeated in six desperate engagements. Basel and Schaffhausen (1601), and Appenzell (1618), were then received into the confederation, and its true independence began. New troubles sprang up with the Reformation. War broke out in 1531 between the Catholics and Protestants, and the former were successful at Cappel (which see), where Zwingli was slain. This victory to some extent settled the boundaries of the two creeds; in 1536, however, Bern wrested the Pays de Vaud from the dukes of Savoy. During the Thirty Years' War, Bern and Zürich contrived to maintain with great skill the neutrality of Switzerland, and in the treaty of Westphalia, in 1648, it was acknowledged by the great powers as a separate and independent state. At this period, the Swiss, in immense numbers, were employed as soldiers in foreign service, and the record of their exploits gives ample evidence of their courage and hardihood. In 1798, Switzerland was seized by the French. At the peace of 1815, its independence was again acknowledged. In 1839, at Zürich, a mob of peasants, headed by the Protestant clergy, overturned the government. In Valais, where universal suffrage had put power into the hands of the reactionary party, a war took place in which the latter were victorious. In 1844, a proposal was made in the Diet to expel the Jesuits; but that body declined to act. The radical party then organized bodies of armed men, called the Free Corps, which invaded the Catholic cantons; but they were defeated. The Catholic cantons then formed a league, named the Sonderbund, for defense against the Free Corps. A majority in the Diet, in 1847, declared the illegality of the Sonderbund, and decreed the expulsion of the Jesuits. In the war which ensued between the federal army and the forces of the Sonderbund, the former were victorious at Freiburg and Lucerne. The leagued cantons were made liable in all the expenses of the war, the Jesuits were expelled, and the monasteries were suppressed. Since then, the most important event which has occurred was a rebellion against the king of Prussia, as prince of Neuchâtel. The canton was declared a republic, with a constitution similar to that of the other Swiss states.

Swivel. A small piece of ordnance, turning on a point or swivel.

Sword. A well-known weapon of war, the introduction of which dates beyond the ken of history. It may be defined as a blade of steel, having one or two edges, set in a hilt, and used with a motion of the whole arm. Damascus and Toledo blades have been brought to such perfection, that the point can be made to touch the hilt and to fly back to its former position. In the last century every gentleman wore a sword; now the use of the weapon is almost confined to purposes of war. Among the forms of the sword are the rapier, cutlass, broadsword, scimitar, sabre, etc.

Sword Law. When a thing is enforced, without a due regard being paid to established rules and regulations, it is said to be carried by sword law, or by the will of the strongest.

Sword, Order of the. A Swedish military order of knighthood, instituted by Gustavus Vasa.

Sword-arm. The right arm.

Sword-bayonet. Short arms, as carbines, are sometimes furnished with a bayonet made in the form of a sword. The back of the handle has a groove, which fits upon a stud upon the barrel, and the cross-piece has a hole which fits the barrel. The bayonet is prevented from slipping off by a spring-catch. The sword-bayonet is ordinarily carried as a side-arm, for which purpose it is well adapted, having a curved cutting edge as well as sharp point.

Sword-bearer. In monarchical countries, is the title given to the public officer who bears the sword of state.

Sword-bearers, Knights. A community similar to, though much less distinguished than, the Teutonic Knights.

Sword-belt. A belt made of leather, that hung over the right shoulder of an officer, by which his sword was suspended on the left side. This belt is no longer used, as the sword is now suspended from the waist-belt.

Sword-blade. The blade or cutting part of a sword.

Sword-cane. A cane containing a sword.

Sword-cutter. One who makes swords.

Sworded. Girded with a sword.

Sword-fight. Fencing; a combat or trial of skill with swords.

Sword-knot. A ribbon tied to the hilt of a sword. In the United States, all general officers wear a gold cord with acorn ends, and all other officers, a gold lace strap, with gold bullion tassel; the enlisted men of cavalry wear a leather strap with a bullion tassel of the same material.

Sword-player. A fencer; a gladiator; one who exhibits his skill in the use of the sword.

Swordsman. A soldier; a fighting man. One skilled in the use of the sword; a professor of the science of fencing.

Swordsmanship. The state of being a swordsman; skilled in the use of the sword.

Sybaris. A celebrated Greek town in Lucania, was situated between the rivers Sybaris and Crathis, and a short distance from the Tarentine Gulf, and near the confines of Bruttium. It was founded by Achæans and Trœzenians in 720 B.C., and soon attained an extraordinary degree of prosperity and wealth, exercising dominion over twenty-five towns, and, it is said, was able to bring 800,000 men into the field. But its prosperity was of short duration. The Achæans having expelled the Trœzenian part of the population, the latter took refuge at the neighboring city of Croton, the inhabitants of which espoused their cause. In

the war which ensued between the two states, the Sybarites were completely conquered by the Crotoniats, who followed up their victory by the capture of Sybaris, which they destroyed by turning the waters of the river Crathis against the town, 610 B.C.

Syef (*Ind.*). A long sword.

Syef-ul Mulk (*Ind.*). The sword of the kingdom.

Sygambri, **Sugambri**, **Sigambri**, **Sycambri**, or **Sicambri**. One of the most powerful tribes of Germany at an early time, belonged to the Istævones, and dwelt originally north of the Ubii on the Rhine, whence they spread toward the north as far as the Lippe. The territory of the Sygambri was invaded by Cæsar. They were conquered by Tiberius in the reign of Augustus, and a large number of them were transplanted to Gaul, where they received settlements between the Maas and the Rhine as Roman subjects. At a later period we find them forming an important part of the confederacy known under the name of Franci.

Symbol. In a military sense, a badge. Every regiment in the British service has its badge.

Syracuse (It. *Siracusa*). Anciently the most famous and powerful city of Sicily, situated on the southeast coast of the island, 80 miles south-southwest from Messina; was founded by a body of Corinthian settlers under Archias, one of the Bacchiads, 734 B.C. In 486 a revolution took place and the oligarchic families—*Geomori*, or *Gamori*, "land-owners"—were expelled, and the sovereign power was transferred to the citizens at large. Before a year passed, however, Gelon, "despot" of Gela, had restored the exiles, and at the same time made himself master of Syracuse. Hieron, brother of Gelon, raised Syracuse to an unexampled degree of prosperity. Hieron died in 467, and was succeeded by his brother Thrasylbulus; but the rapacity and cruelty of the latter soon provoked a revolt among his subjects, which led to his deposition and the establishment of a democratical form of government. The next most important event in the history of Syracuse was the siege of the city by the Athenians, which ended in the total destruction of the great Athenian armament in 413; and Syracuse's renown at once spread over the whole Greek world. Dionysius restored the "tyranny" of Gelon, and his fierce and victorious war with Carthage (397 B.C.) raised the renown of Syracuse still higher. On the death of Hieron II., his grandson Hieronymus, who succeeded him, espoused the side of the Carthaginians. A Roman army under Marcellus was sent against Syracuse, and after a siege of two years, during which Archimedes assisted his fellow-citizens by the construction of various engines of war, the city was taken by Marcellus in 212. Under the Romans, Syracuse slowly but surely declined. Captured, pillaged, and burned by the Saracens (878) it sunk into complete decay, so that very few

traces of its ancient grandeur are now to be seen. It was taken by Count Roger, the Norman, 1088; in the insurrection, Syracuse surrendered to the Neapolitan troops, April 8, 1849.

Syria. At present, forming together with Palestine, a division of Asiatic Turkey; extends between lat. 31° and 37° 20' N. along the Mediterranean from the Gulf of Iskanderoon to the Isthmus of Suez. The oldest inhabitants of Syria were all of Shemitic descent; the Canaanites, like the Jews themselves, and the Phœnicians (who inhabited the coast-regions) were Shemites. So were also the Arameans, who occupied Damascus and extended eastward towards the Euphrates. This territory, Syria proper, became subject to the Hebrew monarchy in the time of David; but after Solomon's death Rezin made himself independent in Damascus, and while the Jewish empire was divided into two kingdoms, the Aramean kings of Damascus conquered and incorporated the whole northern and central part of the country. In 740 B.C. the Assyrian king, Tiglath-Pileser, conquered Damascus, and in 720 B.C. the kingdom of Israel. In 687 B.C. the kingdom of Judah was conquered by Nebuchadnezzar, king of Babylon, and Syria, with Palestine, was now successively handed over from the Assyrians to the Babylonians, from the Babylonians to the Medes, and from the Medes to the Persians. After the battle of the Issus (333 B.C.) Alexander the Great conquered the country, and with him came the Greeks. After his death they formed here a flourishing empire under the Seleucids, who reigned from 312 to 64 B.C. After the victories over Antigonus at Ipsus in 301 B.C., and over Lysimachus at Cynopiedon in 282 B.C., the empire of Seleucus I. actually comprised the whole empire of Alexander with the exception of Egypt. But his son, Antiochus I., Soter (281–260), lost Pergamum, and failed in his attempts against the Gauls who invaded Asia Minor, and Antiochus II., Theos (260–247), lost Parthia and Bactria. Antiochus the Great (223–187) conquered Palestine, which by the division of Alexander's empire had fallen to the Ptolemies of Egypt; but under Antiochus Epiphanes (174–164) the Jews revolted, and after a contest of twenty-five years they made themselves independent. Under Antiochus XIII. (69–64) Pompey conquered the country and made it a Roman province, governed by a Roman proconsul. After the conquest of Jerusalem (70) Palestine was added to this province. By the division of the Roman empire Syria fell to the Eastern or Byzantine part. In 638 the country was conquered by the Saracens. In 664 Damascus was made the capital of Syria, and in 661 of the whole Mohammedan empire. When the Abbassides removed their residence to Bagdad, Syria sank into a mere province. In the 11th century the Seljuk Turks conquered the country. The establishment of

the Latin kingdom by the Crusaders in 1099 was of short duration and of little advantage. They held Jerusalem till 1187, Acre till 1291, but they proved more rapacious and more cruel than the Turks. When in 1291 the Mameluke rulers of Egypt finally drove the Christian knights out of the country, its cities were in ruins, its fields devastated, and its population degraded. Still worse things were in waiting,—the invasion of Tamerlane and his successors, which actually transformed large regions into deserts and the inhabitants into savages. In 1517, Sultan Selim I. conquered the country, and since that time it has formed part of the Turkish empire, with the exception of the short period from 1832 to 1841, when Ibrahim Pasha (who defeated the army of the grand seignior at Konieh, December 21, 1832) governed it under the authority of his father, Mehemet Ali (who had captured Acre, and overrun the whole of Syria). The Druses are said to have destroyed 151 Christian villages and killed 1000 persons, May 29 to July 1, 1860. The Mahomedans massacred Christians at Damascus; about 5800 were slain, but many were saved by Abd-el-Kader, July, 1860; the French and English governments intervened; 4000 French soldiers under Gen. Hautpoul landed at Beyrout, August 22, 1860. The French and Turks advanced against Lebanon, and fourteen emirs surrendered, October, 1860. The pacification of the country was effected, November, 1860; and the French occupation ceased June 5, 1861. The insurrection of Joseph Karaman, a Maronite, in Lebanon, was suppressed, March, 1866; another was suppressed, and Karaman fled to Algeria, January 31, 1867.

System. In fortification, is a particular arrangement and mode of constructing the different works surrounding a fortified place. The principal systems now studied are those of Marshal Vauban, and the improved method invented by Cormontaigne, the celebrated French engineer.

System. A scheme which reduces many things to regular dependence or co-operation. This word is frequently applied to some particular mode of drilling and exercising men to fit them for manœuvres and evolutions. Hence, the Prussian system, the Austrian system, etc.

System, Military. Specific rules and regulations for the government of an army in the field or in quarters, etc.

Systems of Artillery. The character and arrangement of the material of artillery, as adopted by a nation at any particular epoch. The American systems of field and siege artillery are chiefly derived from those of France. The principal qualities sought to be observed in establishing a system of artillery are, simplicity, mobility, and power. The first system adopted in France was about the middle of the 16th century, at which time the various guns of the French artillery were reduced to six. The weights of

the balls corresponding to these calibers ranging from 33½ to ½ pounds. This range of calibers was thought to be necessary, for the reason that it required guns of large caliber to destroy resisting objects, while guns of small caliber were necessary to keep up with the movement of troops. Each of the five principal calibers was mounted on a different carriage, and the ammunition, stores, and tools were carried on different store-carts. Three kinds of powder were used, viz.: large-grain, small-grain, and priming, which were carried in barrels of three sizes. The axle-trees, which were of wood, varied for the different wheels, as well as for the different guns. The gun-carriages were without limbers, and had only two wheels, the shafts being attached to the trails, which often dragged along the ground. No spare wheels were used, except for pieces of large caliber; and for facility of transportation these were put on an axle-tree, so as to form a carriage. With the exception of replacing injured wheels, all repairs were made on the spot, from the resources of the country, and no spare articles were carried with the train. There was no established charge of powder for the guns; although a weight equal to that of the shot was generally used. Such was the character of the artillery which accompanied the French armies up to the middle of the 17th century. In the reign of Louis XIV., the calibers of cannon were gradually changed by the introduction of several foreign pieces. There were 48-, 32-, 24-, 16-, 12-, 8-, and 4-pounders; and those of the same caliber varied in weight, length, and shape. Uniformity existed in general in each district commanded by a lieutenant-general of artillery, but the cannon of one district differed from another. Each district had (for the six kinds of cannon) six carriages, with different wheels, and three kinds of limbers, with different wheels, making nine patterns of wheels, without counting those for the platform-wagons used to transport heavy guns, the ammunition-carts, the trucks, and the wagons for small stores and tools. Spare carriages were carried into the field, but those of one district would not fit the guns of another. There was but one kind of powder, and this was carried in barrels. The charge was usually two-thirds the weight of the projectile, roughly measured. Besides this, the powder often varied in strength according to the district from which it came.

Valière's System.—In 1785, Gen. Valière abolished the 32-pounder, as being heavy and useless, and gave uniformity to the five remaining calibers. Towards the end of the 18th century, mortars, or Dutch howitzers, were sometimes attached to the field-trains; for the latter, a small charge, and caliber of 8 inches, were adopted. There were also light 4-pounder guns attached to each regiment. Up to that time an army always carried with it heavy guns (24-pounders),

and light guns (4-pounders), which were combined in the same park. Valière established a system of uniformity for cannon throughout France; but such was not the case with the carriages and wagons used with them. Great exactness was not then sought for, and there existed as many plans for constructing gun-carriages as there were arsenals of construction. The axle-trees were of wood, the limbers were very low, and the horses were attached in single file.

Gribeauval's System.—In 1765, Gen. Gribeauval founded a new system, by separating the field from the siege artillery. He diminished the charge of field-guns from a half to a third the weight of the shot, but as he diminished the windage of the projectile at the same time, he was enabled to shorten them and render them lighter, without sensibly diminishing their range. Field artillery then consisted of 12-, 8-, and 4-pounder guns, to which was added a 6-inch howitzer, still retaining a small charge, but larger in proportion to that before used. For draught, the horses were disposed in double files, which was much more favorable to rapid gaits. Iron axle-trees, higher limbers, and traveling trunnion-holes rendered the draught easier. The adoption of cartridges, elevating screws, and tangent scales, increased the rapidity and regularity of the fire. Stronger carriages were made for the lighter guns, and the different parts of all were made with more care, and strengthened with iron-work. Uniformity was established in all the new constructions, by compelling all the arsenals to make every part of the carriages, wagons, and limbers according to certain fixed dimensions. By this exact correspondence of all the parts of a carriage, spare parts could be carried into the field ready made, to refit. Thus an equipment was obtained which could be easily repaired, and could be moved with a facility hitherto unknown. In order to reduce the number of spare articles necessary for repairs, Gribeauval gave, as far as practicable, the same dimensions to those things which were of the same nature. The excellence of this system was tested in the wars of the French republic and empire, in which it played an important part. In 1827, the system of Gribeauval was changed by introducing the 24- and 82-pounder howitzers, lengthened to correspond with the 8- and 12-pounder guns, and abolishing the 4-pounder gun and 6-inch howitzer. Afterwards some important improvements were made in the carriages, chiefly copied from the English system; the number for all field-cannon was reduced to two, the wheels of the carriage and limber were made of

the same size; the weight of the limber was reduced, and an ammunition-chest placed on it; the method of connecting the carriage and limber was simplified, and the operations of limbering and unlimbering greatly facilitated; and the two flasks which formed the trail were replaced by a single piece called the *stock*, which arrangement allowed the new pieces to turn in a smaller space than that required by the old ones.

Louis Napoleon's System.—In 1850, Louis Napoleon, emperor of the French, caused a series of experiments to be made at the principal artillery schools of France to test the merits of a new system of field artillery proposed by himself. The principal idea involved in this system was, to substitute a single gun of medium weight and caliber, capable of firing shot and shells, for the 8- and 12-pounder guns, and 24- and 82-pounder howitzers, then in use. The caliber selected was the 12-pounder. The favorable results of all these experiments, and the simplicity of the system, led to the adoption of this, the Napoleon gun, as it is sometimes called, into the French service; and others of similar principle were introduced into various European services, and also into our own. As this piece unites the properties of gun and howitzer, it is called *canon-obusier*, or gun-howitzer.

At no time since the discovery of gun-powder have such important improvements been made in fire-arms as within the past few years. These improvements may be summed up as follows, viz.: (1) Improvement in the quality of cast iron, and the consequent increase in the caliber of sea-coast cannon. In 1820, the heaviest gun mounted in the United States on sea-coast batteries was the 24-pounder; at present the heaviest is a 20-inch gun, carrying a shell weighing 1080 pounds. (2) The use of wrought and chilled iron and steel as a material for fortress carriages, and for covering ships of war. (3) The extensive introduction of shells in sea-coast defenses and naval warfare; and spherical case-shot into the field service. (4) The introduction of rifling for both small-arms and cannon. (5) The successful application of the breech-loading principle to cannon and small-arms of every description, and the great improvement made of late in steel, as well as the power to manipulate masses sufficiently large for the construction of the immense cannon now employed in naval warfare and for sea-coast defense.

Szegedin. The second largest town in Hungary, situated on the right bank of the Theiss. Szegedin is fortified, and here, on August 3, 1849, the Austrians defeated the Hungarians.

T.

Tab. The arming of an archer's gauntlet or glove.

Tabard. A military garment in general use in the latter half of the 15th, and beginning of the 16th century, which succeeded the *jupon* and *cyclas*. It fitted closely to the body, was open at the sides, had wide sleeves or flaps reaching to the elbow, and displayed the armorial ensigns of the wearer on the back and front, as well as on the sleeves. About the middle of the 16th century the tabard ceased to be used except by the officers-of-arms, who have down to the present time continued to wear tabards embroidered with the arms of the sovereign.

Table-money. In the British army and navy, is an allowance sometimes made to officers over and above their pay, for table expenses.

Tablette. Is a flat coping-stone, generally 2 feet wide and 8 inches thick, placed at the top of the revetment of the escarp, for the purpose of protecting the masonry from the effects of the weather, and also to serve as an obstacle to the besiegers when applying the scaling-ladders. It is always considered a matter of importance that the tablette should be concealed from the enemy's view, as he would otherwise be able to direct his artillery against it; therefore, the escarp of all the works inclosed within the covered way is submitted at least 6 inches to the crest of the glacis.

Tabor. A fortified town of Bohemia, 48 miles south-southeast of Prague. Its castle was originally built in 774, destroyed in 1268, but restored in 1420, when the Hussites under Ziska took possession of the town.

Taborite. A Roman soldier armed with a double-edged axe.

Tabors (Fr.). Intrenchment of baggage for defense against cavalry.

Tabour. A small drum, played with one stick, in combination with a fife. It was formerly used in war, but has now given place to the kettle-drum.

Tabriz, or Tabreez (written also *Tauris* and *Tebris*). A city of North Persia, capital of the province of Azerbaijan. It was taken and sacked by Timur in 1392, and was soon after seized by the Turkomans, from whom it was taken by the Persians in 1500. It has been several times in the hands of the Turks, but was finally taken from them by Nadir Shah in 1730.

Tactician. One versed in tactics.

Tactics, Grand. See TACTICS, MILITARY.

Tactics, Military. Is the science and

art of disposing military forces in order for battle, and performing military evolutions in the presence of an enemy. It is divided into *grand tactics*, or the tactics of battle, and *elementary tactics*, or the tactics of instruction. Tactics is the strategy of the battle-field; the science of manœuvring and combining those military units which drill, discipline, and the regimental system have brought to the perfection of machines. It was admirably described by Napoleon as *the art of being the stronger*,—that is, of bringing an overwhelming force to bear on any given point, whatever may be the relative strength of the entire armies opposed. The earliest records of battles are those of mere single combats, in which the chiefs, fighting either on foot or in chariots, performed great deeds; and the commonalty, who apparently were without discipline, were held in profound contempt. With the growth of democracy arose the organization of the *phalanx* (which see), the advance of which was irresistible, and its firmness equally so, if charged in front. It, however, changed front with great difficulty; was much deranged by broken ground, and failed entirely in pursuit, or if attacked in flank. Far lighter and more mobile was the Roman *legion*. (See LEGION.) Among Roman tactics was also the admirable intrenchment, which they scarcely ever omitted as an additional source of strength for their position. "Events reproduce themselves in cycles;" and with the decay of Roman civilization came again the mail-clad heroes and cavaliers—mounted this time on horses—who monopolized the honors of battle, while the undisciplined footmen had an undue share of the dangers. Later in the feudal period, this disparity between knight and footman was diminished by the employment of bodies of archers, whose shafts carried instant death. The adoption of gunpowder for small-arms altogether neutralized the superiority of the armored knight. This change brought infantry into the front place in battle, and threw cavalry into the status of an auxiliary. The French revolutionary wars tended much to the development of artillery as a field-weapon, and Napoleon employed this terrible weapon to its fullest extent, a practice followed by the best modern generals, who never risk a man where a cannon-ball can do the work. Frederick the Great was considered an innovator for fighting with infantry four deep. During the French war, the formation of three deep became general, and still obtains in several European armies. Before the battle of Waterloo, the British leaders

had acquired sufficient confidence in their troops to marshal them in a double line. It is doubtful whether the advance in arms of precision will not soon necessitate the formation in a single line, or even in a single line in open order. We will now notice briefly a few of the more important principles, as our space will not permit us to go into that intricate science, modern tactics. As to *the art of being stronger*, which is undoubtedly the highest recommendation in a general, we may cite the example of the battle of Rivoli. In 1796, Napoleon was besieging Mantua with a small force, while a very much smaller army of observation watched the Austrians. The Austrian commander had collected at Trent a force powerful enough to crush completely the French army, with which he was marching south. Parallel with his course lay the Lake of Garda, and to prevent the enemy escaping up one side as he marched down the other, the Austrian leader divided his army into two powerful corps, and marched one down each side of the lake. The instant the young French general knew of this division he abandoned the siege of Mantua, collected every available man, and marched against one body of the enemy. Though far inferior on the whole, he was thus superior at the point of attack, and the victory of Rivoli decided virtually the whole campaign. This corresponded in principle with Napoleon's general plan in battle. He formed his attack into column, tried to break through the centre of the enemy's line; and if he succeeded, then doubled back to one side, so as to concentrate the whole of his own force against one-half of the enemy's, which was usually routed before the other half of the line could come up to the rescue.

Taken collectively, the tactics of the three arms may thus be summarized: The infantry form the line of battle, and probably decide the day by a general advance over the enemy's ground. The cavalry seek to break the opposing infantry by frequent charges in front, or on any flank which may be left exposed. If a part of the line wavers, a charge of horse should complete the disarray. When the rout commences, the cavalry should turn it by furious onslaught into utter discomfiture. The province of the artillery is to cannonade any portion of the line where men are massed, or where a charge is about to be made; to demoralize cavalry, and generally to carry destruction wherever it can best disconcert the enemy. Adverting now very briefly to the tactics of the several arms individually, we have—

Infantry.—This force has four formations,—skirmishers, line, column, and square. The skirmishers precede and flank an advancing line or column, picking off the enemy, whose masses offer good mark, while their own extended order gives them comparative impunity. If resistance be encountered in force, the skirmishers retreat behind their massed supports. The line is a double

or treble line of men, firing or charging. For musketry purposes, it is the most formidable formation, and is the favorite English tactic in every case where the officers can depend on the steadiness of their men. For bursting through a line, the deep column is the most effective. It is the favorite French formation, and during the revolutionary and Napoleonic wars, the British and Russians alone succeeded in resisting it. The column is the best formation on a march; and the line, when in actual collision with the enemy. The formation in *echelon* to a great extent combines these advantages.

Cavalry.—The function of heavy cavalry is limited to the charge in line. The light cavalry form in small sections, to scour the country, collect supplies, and cut off stragglers.

Artillery.—No distinct tactics exist for this arm beyond the fact that a concentrated fire is vastly the most effective, and that the artillery should always have a support of infantry at hand, to protect it from a sudden incursion of hostile cavalry.

Tactics of position depend on the moral energy of the commander-in-chief. Few would dare, as Caesar did, an invasion in which there was no retreat if defeated. It is a military maxim not to fight with the rear on a river, unless many bridges be provided for retreat, in case of disaster. A convex front is better than a concave front, because internal communication is more easy. The flank should be protected by cavalry, or preferably by natural obstacles. In battle, a long march from one position to another, which exposes the flank to the enemy, is a fatal error. By such, the French won Austerlitz, and lost Talavera. In a pursuit, a parallel line is better than the immediate route the retreating enemy has taken, as supplies will be more readily procured, and he may by celerity be attacked in flank. This was strikingly exemplified in the Russian pursuit of Napoleon's army retreating from Moscow.

Tae-pings, or Tai-pings. The name given to the Chinese rebels who made their appearance in 1850, and desolated some of the best provinces of China. Peking was taken by the English and French on October 12, 1860. Its capture was followed by the ratification of the treaty of Tien-tsin, which, granting important privileges to European merchants, made it the direct interest of the English, French, and American governments to re-establish order in China. The repulse of the rebels at Shanghai in August, 1860, had been followed by several engagements between them and the imperialists, in which they were defeated. Ward, an American, who had taken service under the emperor, and who showed a remarkable talent for organizing irregular troops, had wrought a wonderful improvement in the imperialist army, and he was the chief means of their success. In the beginning

of 1862, the Tae-pings again advanced on Shanghai, and were twice defeated. In the autumn of the same year, Ward was killed; Ward's force was handed over to an English officer, and took the name of Gordon's brigade. Gordon's brigade rendered essential service to the imperial government. The rebels were defeated in upwards of sixteen engagements; and in 1864, almost every important city was taken from them. The conduct of the imperial authorities at Su-chow, where a horrible massacre took place, led to the withdrawal of the English military force; but the rebellion had been effectually checked. Toward the end of 1864, the Tae-pings, however, still offered an opposition to the imperialists in Kiang-tan, all the more formidable in consequence of the prevalence of brigandage and insurrectionary movements in parts of the empire not affected by the Tae-ping rebellion. In January, 1865, the Mohammedan Tartars of Songaria, on the Siberian frontier, assisted by the free Kirghis tribes, took the town of Tarbagatai, and afterwards Kouldja. In the following June, a still more serious insurrection broke out in China proper, that of the Nien-fei, or rebels of the north, whose special object was to overturn the reigning dynasty. One body of them, in the beginning of 1866, caused serious alarm in Hankow, and would have attacked the European settlement but for the arrival of some English gunboats. It is believed that the last embers of the Tae-ping rebellion were trodden out in February, 1866, when from 80,000 to 50,000 rebels were routed by the imperial army at Kia-ying-chou in Kwan-tung. The victorious general then set out to attack the Nien-fei, or northern rebels, at Hankow, and the imperial troops were several times defeated by them in 1867; but late in 1868, their operations became unimportant.

Taganrog. A town of Russia in Europe, in the government of Ekaterinoslav, near the northwest extremity of the Sea of Azov, 172 miles northeast from Kertch. The town was bombarded by a fleet of French and British gunboats in 1855.

Tagliacozzo. A town of Southern Italy, in the Aleruzzi Mountains, where on August 28, 1268, Charles of Anjou, the usurping king of Naples, defeated and made prisoner the rightful monarch, young Conradin, who had been invited into Italy by the Ghibelline party; their opponents, the Guelphs, or papal party, supporting Charles.

Tagliamento. A river in Lombardy, Northern Italy, near which the Austrians, under the Archduke Charles, were defeated by Bonaparte, March 16, 1797.

Tail of the Trenches. The post where the besiegers begin to break ground, and cover themselves from the fire of the place, in advancing the lines of approach.

Taishes. Armor for the thighs.

Take. To lay hold of; to seize. To obtain possession of by force or artifice; to capture; to make prisoner. To attack; to

seize; as, to take an army, a city, or a ship. *To take aim*, to direct the eye or weapon; to aim. *To take arms*, to commence war or hostilities. *To take advantage of*, to avail one's self of any peculiar event or opening, whereby an army may be overcome. *To take ground to the right or left*, is to extend a line, or to move troops in either of those directions. *To take down*, is to commit to paper that which is spoken by another. *To take on*, an expression in familiar use among soldiers that have enlisted for a limited period, to signify an extension of service by re-enlisting. *To take the field*, is to encamp, to commence the operations of a campaign. *To take up*, to seize; to catch; to arrest; as, to take up a deserter. *To take up quarters*, to occupy locally; to go into cantonments, barracks, etc.; to become stationary for more or less time. *To take up the gauntlet*, is to accept a challenge.

Takel (*Anglo-Saxon*). The arrows which used to be supplied to the fleet.

Talavera de la Reyna. A town of Spain in New Castile, in the modern province of Toledo, on the Tagus, 75 miles southwest from Madrid. Here on July 27 and 28, 1809, Sir Arthur Wellesley, with 19,000 English and German troops, and about 84,000 Spaniards, who, however, with very trifling exceptions, were not engaged, defeated upwards of 50,000 veteran French troops under Joseph Bonaparte and Marshals Jourdan and Victor.

Talk. Among the Indians of North America, a public conference, as respecting peace or war, negotiation, and the like; or an official verbal communication made from them to another nation or its agents, or made to them by the same.

Talus. The old word in fortification for a slope.

Tambour. In fortification, is a small work, usually a timber stockade, about 6 feet high, and loop-holed. Its object is to defend a gateway, the road into a village, or to afford flanking fire on a bridge, etc. The tambour on the covered way is the traverse which closes an entrance from the glacis.

Tampion, or Tompion. The wooden plug placed in the mouth of a piece of ordnance to preserve it from dust and damp. In naval gunnery, the tampion is the wooden bottom for a charge of grape-shot.

Tam-tam (*Hind. tom-tom*). A drum used by the Hindoos, made of an alloy of copper and tin, and very sonorous.

Tanagra (now *Grimadha*, or *Grimada*). A celebrated town of Boeotia, on the left bank of the Asopus, 200 stadia from Plataeae, in the district Tanagraea. Being near the frontiers of Attica, it was frequently exposed to the attacks of the Athenians; near it the Spartans defeated the Athenians, 457 B.C., but were defeated by them in 426, when Agis II. headed the Spartans, and Nicias the Athenians.

Tang. The tang of the breech of a musket, is the projecting part by which the barrel

is secured to the stock. Also, that part of a sword-blade to which the hilt is riveted.

Tangent Scale. In gunnery, a brass plate, the lower edge of which is cut to fit the base-ring or base-line of the piece, and the upper edge cut into notches for each one-fourth degree elevation. It is used in pointing, by placing the lower edge on the base-ring, or base-line, with the radius of the notch corresponding with the highest point of the base-ring or line; and sighting over the centre of the notch; and the highest point of the muzzle, or top of the muzzle-sight.

Tangier. A seaport of Morocco, on a small bay or inlet of the Strait of Gibraltar. Tangier was taken by the Portuguese in 1471, and ceded to the English in 1662, and held by them for twenty-two years. It was bombarded by the French in 1844.

Tanjore. A town of British India, capital of a district of the same name, in the presidency of Madras. In 1678 Tanjore was conquered by the Mahratta chief, Vencajee, brother of Sevajee. In the reign of the rajah Tooljajee, the nabob of Arcot, supported by the Madras government, laid claim to tribute from Tanjore, and the rajah was deposed, but was subsequently restored.

Tannadar. In the East Indies, a commander of a small fort or custom-house.

Tannenberg (East Prussia). Here Ladislaus V., Jagellon of Poland, defeated the Teutonic Knights with great slaughter, the grand master being among the slain, July 15, 1410. The order never recovered from this calamity.

Tap. A gentle blow on the drum.

Taps. A sound of drum or trumpet which takes place usually about a quarter of an hour after tattoo, and is an indication that all lights in the soldiers' quarters will be extinguished, and the men retire to bed.

Tapuri. A powerful people, apparently of Scythian origin, who dwelt in Media, on the borders of Parthia, south of Mount Coronus. They also extended into Margiana, and probably farther north on the eastern side of the Caspian, where their original abodes seem to have been in the mountains called by their name.

Tara. A hill in Meath, Ireland, where it is said a conference was held between the English and Irish in 1178. Near here, on May 26, 1798, the royalist troops, 400 in number, defeated the insurgent Irish 4000 strong.

Taranto (anc. Tarentum). A town of Southern Italy, province of Terra d'Otranto, is situated on a rocky islet formerly an isthmus between the Mare Piccolo (Little Sea), and the Mare Grande (Great Sea), or Gulf of Taranto, on the west. Ancient Tarentum was a far more splendid city than its modern representative. Its greatness dates from 708 B.C., when the original inhabitants were expelled, and the town was taken possession of by a strong body of Lacedæmonian Partheniæ under the guidance of Phalanthus.

It soon became the most powerful city in the whole of Magna Græcia, and exercised a kind of supremacy over the other Greek cities in Italy. It possessed a considerable fleet of ships of war, and was able to bring into the field, with the assistance of its allies, an army of 80,000 foot and 8000 horse. The people of Tarentum, assisted by Pyrrhus, king of Epirus, supported a war which had been undertaken in 281 B.C. by the Romans, to avenge the insults the Tarentines had offered to their ships when near their harbors; it was terminated after ten years; 800,000 prisoners were taken, and Tarentum became subject to Rome. Except the citadel, Tarentum was captured by the Carthaginians, 212, but recovered by Fabius, 209 B.C. Tarentum has shared in the revolutions of Southern Italy.

Tarazona. A town of Spain, in the province of Zaragoza, on the Queyles, a tributary of the Ebro. It is the ancient *Turiaso*, and here a few Roman troops routed a Celtiberian army. It became a *municipium* under the Romans.

Tarbes. A town of France, in the department of Hautes Pyrenées, on the left bank of the Adour. For a long time it belonged to the English monarchs, and it was the residence of the Black Prince. On March 20, 1814, a combat took place here between the British under Wellington and the French under Soult, in which the former gained the victory.

Tar-bucket. See IMPLEMENTS.

Tard-venus, or Malandrins (Fr.). Freebooters, banditti, who elected their own chief, and appeared first in France in 1360.

Tarentum. See TARANTO.

Target. In its modern sense, is the mark for aiming at in practicing with the cannon, rifle, or bow and arrow. In its more ancient meaning, a target, or *targe*, was a shield, circular in form, cut out of ox-hide, mounted on light but strong wood, and strengthened by bosses, spikes, etc. Of modern targets, the simplest is that used for archery. With regard to rifle-targets, the numerous rifle-matches have caused ranges to be constructed over the whole country. The necessities are: a butt, artificially constructed or cut in the face of a hill, to prevent wide balls from scattering; a marker's shot-proof cell, near the targets; and a range of such length as can be procured. The targets used at the Creedmoor range on Long Island, and by the U. S. army, are divided into three classes and are of the following sizes: The *third class*, to be used at all distances up to and including 800 yards, is a rectangle 6 feet high and 4 feet wide. Three concentric circles are described, with the middle point as a centre and radii of 4, 18, and 28 inches respectively. The inner circle is black, and so are the lines marking the circumference of the middle and outer circles; the rest of the target is white. The *second class* is a square, 6 feet high. Three concentric circles are drawn, with the middle point as a

centre and radii of 11, 19, and 27 inches respectively. The inner circle is black, as well as the circumferences of the other circles; the rest of the target is white. This target is used at all distances over 800, to, and including, 600 yards. The *first class*, to be used at all distances over 600 yards, is a rectangle, 6 feet high and 12 feet wide. It has two concentric circles, described with a radii of 18 and 27 inches respectively, the centre being at the middle point of the target, and two lines drawn parallel to, and 8 feet from, each end (leaving the *inner*, square, 6 feet by 6 feet). The target is white, except the lines just indicated and the inner circle, which are black. The smallest circle, always painted black, is called the *bull's-eye*, and when struck, counts 5 for the marksman; the ring embraced between the bull's-eye and the circumference of the next larger circle is called the *centre*, which counts 4; and the ring between the second and third circles is called the *inner*, which scores 3; and the space outside of the larger circle is called the *outer*, and scores 2. In the first-class target the space between the second circle and the vertical lines is the *inner*, and the space outside the vertical lines is the *outer*.

In artillery practice, targets of considerable size are used at long ranges. The usual practice is over the sea; targets are then painted on the sides of old vessels, or are floated by buoys. For trying the power of ordnance, solid targets are constructed to resemble the sides of iron-plated ships, portions of fortification, etc.

Targeted. Furnished or armed with a target.

Targeteer, or Targetier. One armed with a target or shield.

Tariere (Fr.). A machine of war similar to the battering-ram (which it preceded), excepting that the head was pointed. It made the first opening in the wall, which was increased by the *belier*.

Tarifa. A seaport town of Spain, 20 miles southwest from Gibraltar. It was successfully defended in 1811 by Col. Gough, with a body of 2500 British and Spanish troops against a French force of 10,000 men, under Victor and Laval.

Tarquinius. An ancient city of Etruria, on the left bank of the Marta, about 4 miles from the Mediterranean. In 898 B.C., while the Romans were at war with the Veii, they were attacked by the Tarquinians, who seem from this time to have been frequently united with the other Etruscan cities against Rome. War was carried on with varying success and some intermissions till 851, when a truce of forty years was agreed upon. After its expiration, hostilities were again for a short time renewed; but in 809 another truce was concluded, in the course of which Tarquinii seems to have gradually become subject to Rome. It continued to be a flourishing town under the empire, and after its fall, until it was destroyed by the Saracens.

Tarragona (anc. *Turraco*). A seaport city of Spain, capital of the province of the same name, at the mouth of the Francoli, in the Mediterranean, 52 miles west-southwest from Barcelona. The ancient Tarraco was originally a Phœnician settlement; it afterwards became the capital of the Roman province called by its name. After the fall of the empire, it was taken by the Goths; and at a later period was laid in ruins by the Moors. In the 11th century the modern town was founded on the site of the former. In 1705, it was captured by the English, but was afterwards abandoned; and in 1811 it was taken and sacked by the French under Suchet.

Tarred-links. See PYROTECHNY.

Tarsus (now *Tersus*). Anciently the chief city of Cilicia, and one of the most important in all Asia Minor, situated on both sides of the navigable river Cydnus, about 18 miles from the sea. In the time of Xenophon, who gives us the first historical notice of Tarsus, it was taken by Cyrus. At the time of the Macedonian invasion, it was held by the Persian troops, who were prevented from burning it by Alexander's arrival. It played an important part as a military post in the wars of the successors of Alexander, and under the Syrian kings. As the power of the Seleucidæ declined, it suffered much from the oppression of its governors, and from the wars between the members of the royal family. At the time of the Mithridatic war, it suffered, on the one hand, from Tigranes, who overran Cilicia, and, on the other, from the pirates, who had their strongholds in the mountains of Cilicia Aspera, and made frequent incursions into the level country. From both these enemies it was rescued by Pompey, 66 B.C. In the civil war it took part with Cæsar. For this the inhabitants were severely punished by Cassius, but were recompensed by Antony, who made Tarsus a free city. It was the scene of important events in the wars with the Persians, the Arabs, and the Turks, and also in the Crusades.

Tartares (Fr.). A word used in the French army to distinguish officers' servants and batmen from the soldiers who serve in the ranks. *Tartare* likewise means a groom.

Tartary (properly *Tatary*). Is the name under which, in the Middle Ages, was comprised the whole central belt of Central Asia and Eastern Europe, from the Sea of Japan to the Dnieper, including Manchuria, Mongolia, Eastern Turkestan, Independent Turkestan, the Kalmuck and the Kirghis steppes, and the old khanates of Kasan, Astrakhan, and the Crimea, and even the Cossack countries; and hence arose a distinction of Tartary into European and Asiatic. But latterly the name Tartary had a much more limited signification, including only that tract bounded on the north by Siberia, and on the south by China and Thibet, along with Independent Turkestan; and at the present day, many writers apply it as a synonym for

Turkestan. The Tartars (or, more properly, Tatars) was originally a name of the Mongolic races, but came to be extended to all the tribes brought under Mongolic sway by Genghis Khan and his successors, including Tungusic and Turkic races. The term is therefore not to be considered as ethnological, though all, or almost all, the peoples included under it, in its widest sense, belong to the Turanian family, but is rather to be understood in the same sense as the term "Franks" used by the Mohammedans. During the decline of the Roman empire, these tribes began to seek more fertile regions; and the first who reached the frontier of Italy were the Huns, the ancestors of the modern Mongols. The first acknowledged sovereign of this vast country was the famous Genghis Khan. His empire by the conquest of China, Persia, and all Central Asia (1206-27), became one of the most formidable ever established; but it was split into parts in a few reigns. Timur, or Tamerlane, again conquered Persia, broke the power of the Turks in Asia Minor (1370-1400), and founded the Mogul dynasty in India, which began with Baber in 1526, and formed the most splendid court in Asia, till the close of the 18th century. The Calmucks, a branch of the Tartars, expelled from China, settled on the banks of the Volga in 1672, but returned in 1771, and thousands perished on the journey.

Tasa. In the East Indies, a kind of drum, formed of a hemisphere of copper, hollowed out and covered with goat-skin. It is hung before from the shoulders, and beat with two rattans.

Taslet. A piece of armor formerly worn on the thigh.

Tasse. Formerly a piece of armor for the thighs; an appendage to the ancient corselet, consisting of skirts of iron that covered the thighs, fastened to the cuirass with hooks.

Tattoo. The evening sound of drum or trumpet, after which the roll is called, and all soldiers not on leave of absence should be in their quarters.

Tau, Cross. In heraldry, a cross of a form somewhat resembling the Greek letter *Tau*. St. Anthony is generally represented with a cross of this description, embroidered on the left side of his garment.

Taulantii. A people of Illyria, in the neighborhood of Epidamnus. One of their most powerful kings was Glaucias, who fought against Alexander the Great.

Taunton. A town of England, county of Somerset, on the river Tone. It was taken by Perkin Warbeck, September, 1497; and here he was surrendered to Henry VII. October 5 following. The Duke of Monmouth was proclaimed king of Taunton, June 20, 1685; and it was the scene of the "bloody assize" held by Jeffreys upon the rebels in August.

Taupins, or Franks-Taupins (Fr.). A name which was formerly given to a body

of free-arches, or francs-archers, in France. This body consisted chiefly of countrymen and rustics.

Tauromenium. An ancient Greek city in Sicily, on the east coast of the island, about half-way between Messina and Catania. In 894, Dionysius besieged the new city, and spent the greater part of a winter in an unsuccessful effort to take it. A peace was concluded in 892, in terms of which Tauromenium became subject to Dionysius, who immediately expelled the former inhabitants, and supplied their place by mercenaries of his own. In 858, Andromachus collected the survivors of the original inhabitants of Naxos, and settled them at Tauromenium. Under Andromachus the city made rapid progress. He assisted Timoleon in his expedition to Sicily. At a later period the city was conquered by Hiero of Syracuse, and it remained subject to that city until, with the whole of Sicily, it passed into the power of the Romans. In the Servile war in Sicily (134-82 B.C.), it was captured by the insurgent slaves, and held by them till the last extremity, suffering the utmost calamities, until the citadel was betrayed to the Romans. It was taken and destroyed by the Saracens after a siege of two years, in 906.

Taxiarchs. In the Athenian army, were ten in number (every tribe having the privilege of electing one), and commanded next under the *strategoi*. Their business was to marshal the army, give orders for their marches, and appoint what provisions each soldier should furnish himself with. They had also power to cashier any of the common soldiers, if convicted of a misdemeanor; but their jurisdiction was only over the foot.

Tchernaya. A river in the Crimea. On August 16, 1855, the lines of the allied army at this place were attacked by 50,000 Russians under Prince Gortschakoff without success, being repulsed with the loss of 3829 slain, 1658 wounded, and 600 prisoners. The brunt of the attack was borne by two French regiments under Gen. d'Herbillon. The loss of the allies was about 1200; 200 of these were from the Sardinian contingent, which behaved with great gallantry, under the command of Gen. La Marmora. The Russian general Read, and the Sardinian general Montevecchio, were killed. The object of the attack was the relief of Sebastopol, then closely besieged by the English and French.

Tearless Victory. In 367 B.C. Archidamus, king of Sparta, defeated the Arcadians and Argives in the "Tearless Battle," so called because he had won it without losing a man.

Tebet (Fr.). A kind of axe which the Turks carry at their saddle-bow during war. *Teepe.* See *WIGWAM*.

Teflis, or Tiflis. A city of Russia in Asia, in Transcaucasia, capital of the province of Georgia. It was founded about the middle of the 5th century, by a powerful monarch

called Waktang; and afterwards rose to great importance. It was taken by Genghis Khan in the 12th century, and by Mustapha Pasha, 1576. In 1723 it was taken by the Turks, in 1784 by Kouli Khan, and it was destroyed by Aga Mohammed in 1795. It came into the possession of the Russians in 1801. A treaty of peace was concluded here between Russia and Persia, October 12, 1813.

Tefterdar Effendi. The commissary-general is so called among the Turks.

Tegea. An ancient city of Greece, forming one of the most powerful states in Arcadia. The Tegeatæ long resisted the supremacy of Sparta, and it was not till the Spartans discovered the bones of Orestes that they were enabled to conquer this people. The Tegeatæ sent 3000 men to the battle of Platææ, in which they were distinguished for their bravery. They remained faithful to Sparta in the Peloponnesian war; but after the battle of Leuctra they joined the rest of the Arcadians in establishing their independence. During the wars of the Achæan league, Tegea was taken both by Cleomenes, king of Sparta, and Antigonos Doson, king of Macedonia, and the ally of the Achæans.

Tekrit (anc. Birta). A town situated on the Euphrates, in Mesopotamia. It was unsuccessfully besieged by Sapor I., king of Persia, in 260.

Telegraph, Field or Flying. During the civil war (1861-65) in the United States a signal corps was organized, whose duties extended to the management of field telegraphs, and light lines, when the formation of the country was such that aerial signals could not be used, or it was for any reason desirable that short electric lines be extended. It has been demonstrated that electric instruments may be of the most simple construction; and electric lines can be set up, and be utilized in places where a few years ago it was deemed impracticable to employ them; and can be worked without other skilled labor than that of the soldiers attached to the posts, and with no apparatus but such as can be had at a trivial expense. There is no reason why, with properly drilled parties, electric lines may not be thrown out in the moments which precede, or even during the progress of, a battle, and be so worked as to lessen infinitely that difficulty of rapid communication which has so often caused disaster. With a corps well organized and well equipped, the connection between the corps of an army, and between the corps headquarters and general headquarters, ought to be perfected in a very few hours after the halt of the army. The field lines of the Signal Corps consist of rolls of wire carried in light-wheeled vehicles, and light "lance poles," as they are called, on which the wire is stretched when necessary. The wire made for the purpose is of small strands of iron and copper twisted, to give it strength and

flexibility. It is insulated with prepared india-rubber, or other material, and wound on reels which, in an emergency, can be carried anywhere by hand, while the wire reeling out can be raised upon fences, fastened to trees, or laid along the ground. The instruments used at first were of a kind known as the Beardslee instrument. These instruments are worked without batteries, the electric current being generated by revolving magnets. They were "indicating," an index upon a dial pointing, at the receiving station, to whatever letter was designated by the index handle upon a similar dial at the sending station. There were as advantages attaching to this instrument, that it was portable and compact, could be set at work anywhere, required no batteries, acids, or fluids; and what was thought of importance in the early days of the civil war, and while the corps was a temporary organization, it could be worked by soldiers without skill as operators. The defects were, that messages could not be sent as rapidly or as far as by some other instruments. Nor could several instruments work easily upon a single circuit. For some uses on the field of battle, or under fire, where the attention of the reader is disturbed, it is, perhaps, as good an instrument as has been devised. With a permanent corps, or at secure stations, it gives place to some of the forms of signal or of sound instruments. The instruments upon field lines may be of very simple structure. The signal instruments, either the needle or the letter instruments, can be used in actual conflict, if the reports of heavy guns or other disturbances of action render reading by sound unreliable. The manufacture of both instruments and batteries has been improved, until there is now no trouble in carrying either in the field in the roughest campaigns. The difficulty in reading from telegraphic instruments by sound, which has been the greatest obstacle to their use, can be almost done away with by using them with codes of easy signals. In the Prussian army, also, the electric telegraph is applied for field purposes. Morse's system is used. Each headquarters of an army and each army corps, has a telegraphic division of 3 officers, 187 men, 78 horses, and 10 wagons. Two of the latter are fitted up as operating-rooms, and the other 8 are used for carrying poles and other material, including 5 miles of wire to each wagon, which can be reeled off by the moving of the vehicle. Of the whole 40 miles, 5 are insulated, and can be run along the ground. It will be seen that each army corps can put out 40 miles of line without recourse to other wires, but use is always made of lines found in the country, in case they will answer. Single poles of light material are used, without joints, and about 10 feet long, and only every third pole is put in the ground. The personnel is brought into the army from the civil telegraphic service at home. While in the field, the operators as-

sume military rank, and, like agents of the Post-office Department, are known as "military officials," not as "military officers." The men are on a footing with train-soldiers. The operating-wagons are a little larger than the Rucker ambulances of the U. S. service, but much heavier. Just in the rear of the driver is a partition shutting off the rear portion of the carriage. At his back, and under his seat, is a capacious box, in which are carried tools, and the material necessary in telegraphing. On one side of the rear closed portion is a neat table with a compact operating instrument on it, and a battery under it; and on the opposite side is the operator's bench, the space underneath it being also economized. On the outside near the table are sockets, with thumb-screws connected with the battery, to receive the wires. During the Franco-Prussian war, besides keeping the king in telegraphic communication with his ministers, lines were run from Gen. von Moltke's headquarters to all the different corps in the field. The telegraph corps always evinced admirable promptness in keeping the lines closed up as the army moved forward. In Great Britain, the system of military telegraphy forms part of the duties of the Royal Engineers.

Telemeter. An instrument for determining long distances. (See **RANGE-FINDER**.) One of the best-known telemeters is the invention of Capt. A. Gautier of the French army. It consists of a short tube containing two mirrors set at an angle of 45° with each other, one of which is fixed; the other admits of a slight rotation. A hole in the side of the tube allows the image of a secondary distant object on the prolongation of the base-line to be brought in line with that of the distant object whose distance is to be measured. An observation is next taken from the other end of the short base-line, and the image of the secondary object again brought in contact with that of the principal object by rotating a ring on the front of the tube. The extent of this rotation (as denoted by a scale), gives a factor which, multiplied by the base-line, gives the required distance.

The Boulongè telemeter is an instrument devised for ascertaining the distance to a point by means of sound proceeding from the point to the place of observation. The one used for artillery consists of a glass tube about 6 inches in length, filled with a transparent liquid that does not freeze except with intense cold. In the liquid is a metallic disk, which moves freely from one end of the tube to the other. It is so adjusted that the motion will be uniform and comparatively slow. The tube is inclosed in a brass case, to which is attached a scale, after the fashion of a thermometer. This scale is marked for each hundred yards up to 4000. The divisions on the scale show the distance, in yards, through which sound will travel in air during the time required for the disk to

descend over the space on the scale marked by the corresponding number of yards. The instrument must be held vertically, or as nearly so as possible. To arrest the motion of the disk at any point, the instrument is quickly turned to a horizontal position.

To use it for determining the time of flight of shells it is held in the right hand, back of the hand up, with the zero of the instrument to the left; a turn of the wrist to the right brings the instrument vertical, with the zero end uppermost; the disk then descends, and a turn of the wrist to the left arrests its motion. The observer, holding the instrument as described, watches for the flash of the shell, and upon seeing it instantly brings the instrument to a vertical position; upon hearing the report from the shell he instantly turns it back again. The position of the disk indicates the number of yards from the observer to where the shell exploded.

To ascertain the distance to an enemy's battery, the instrument is held and turned in the same manner. The observer watches for the flash of a gun; observing which, he turns the instrument, and when he hears the report turns it back and reads off the distance. Each hundred yards on the scale is subdivided into quarters.

The telemeter invented by Capt. A. Gautier of the French army is an instrument for measuring, with a great degree of approximation, any difference, not exceeding three degrees, which may be exhibited in the bearing of a distant object by viewing it from different points of a base-line transverse to its general direction from the observer. The instrument, in its simplicity, accuracy, and portability, recommends itself in all cases where a knowledge of distances is desired at any moment and with the least possible delay; such, for instance, as ranging, river-crossing, reconnoitring, and the like. A slight acquaintance with its use on such occasions enables the observer to estimate, with more than ordinary promptitude and precision, the distance which it might be all-important to obtain.

The instrument resembles in shape and size one barrel of an ordinary reconnoitring or field-glass. The case in which it is carried is fashioned so as to answer as a handle for holding the instrument when making observations. Within the barrel of the instrument are placed two mirrors at an angle of 45° with each other; this angle can be varied within certain limits by means of a milled-headed screw acting on one of them. The mirrors are thus made to operate upon the principle of the sextant. A slot on one side of the barrel permits the rays of light from an object to fall upon one of the mirrors, from whence they are reflected upon the other mirror, and the image is seen through the eye-glass at the small end of the instrument. At the front or large end is fixed, in a ring surrounding the barrel, a prism, whose displacement modifies the di-

rection of an object seen through it. At the rear of the instrument is a small eye-glass, by means of which the observer sees, *over* the mirrors and through the prism, the object which is before him, and by double reflection in the mirrors the object to the side of him.

The American general Borden has invented a large telemeter for garrison and sea-coast service which has been tested in Germany in 1875 and 1876 and found to be very exact in the determination of distances. He has also constructed a new model for field and mountain artillery which can be packed up and transported on horseback.

Telephone. An instrument for reproducing sounds, especially articulate speech, at a distance, by the aid of electricity or electro-magnetism. It consists essentially of a device by which currents of electricity, produced by the sounds, and exactly corresponding in duration and intensity to the vibrations of the air which attend them, are transmitted to a distant station, and there, acting on suitable mechanism, reproduce similar sounds by repeating the vibrations. Telephones were recently used by Sir Garnet Wolseley in the war in Zululand, and are being rapidly adopted in European armies.

Tell Off. A military term, expressing the dividing and practicing a regiment or company in the several formations, preparatory to marching to the general parade for field exercise.

Tellenon (Fr.). An ancient machine used at sieges. See **TOLEMON**.

Tellevas (Fr.). A large shield formerly used, similar to the *pavois*.

Tembu, Abatempu, or Tambookie. Is the name of an important tribe of Kaffirs, occupying the region east of the present boundary of the Cape Colony. In the earlier Kaffir wars, and even in the great one of 1835-36, the Tambookie Kaffirs remained neutral, and even friendly to the colonists; but in the war of 1848-49, they were induced to join the other tribes, and were defeated with great loss by a small colonial force. In the war of 1851, they were much broken and scattered; but eventually submitting to the British authority, they have quietly located themselves in the unoccupied country east of the White Kei and Tsomo Rivers.

Temesvar, or Temeswar. A town of the Austrian empire, capital of a circle of the same name, and of the crownland of Banat. It is strongly fortified with walls, moats, and outworks. Temesvar has played an important part in modern history. It was in the hands of the Turks from its capture in 1562 till 1718, when it was regained by Prince Eugene, and strongly fortified. In 1849, it was besieged for 107 days by the Hungarian insurgents, but it held out until it was relieved by Gen. Haynau.

Templar, Knights. A celebrated religious and military order, founded at Jerusalem in the beginning of the 12th century,

by Hugues de Paganes, Geoffroy de St. Omer, and seven other French knights, for the protection of the Holy Sepulchre and of pilgrims resorting thither. The knights were bound by their rule to hear the holy office every day, or if prevented by their military duties, to say a certain number of paternosters instead, and were compelled to abstain from certain articles of food on certain days of the week. They might have three horses and an esquire each, but were forbidden to hunt or fowl. After the conquest of Jerusalem by the Saracens, the Templars spread over Europe; their valor became everywhere celebrated; immense donations in money and land were showered on them, and members of the most distinguished families thought themselves honored by enrollment in the order. As the power and prosperity of the Templars increased, so did their luxury, arrogance, and other vices, which gave the French kings a pretext for endeavoring to suppress them, and lay hold of their possessions. Their principal enemy was Philippe IV. of France, who induced Pope Clement V. to accede to a scheme by which the whole members of the order were seized and imprisoned, their lands confiscated, and many of them tried, convicted, and executed for capital crimes. The English Templars were arrested by command of Edward II. In 1312, the whole order throughout Europe was suppressed by the Council of Vienne, and its property bestowed on the Knights of St. John. The habit of the Templars was white, with a red cross of eight points of the Maltese form worn on the left shoulder. Their war-cry was "Beau séant"; and their banner, which bore the same name, was parted per fess sable and argent. They also displayed above their lances a white banner charged with the cross of the order. Their badges were the *Agnus Dei*, and a representation of two knights mounted on one horse,—indicative of the original poverty of the order.

Ten Thousand, Retreat of the. See **RETREAT OF THE TEN THOUSAND GREEKS**.

Tenable. Such as may be maintained against opposition; such as may be held against attack.

Tenaille. In fortification, is a low work, constructed in the main ditch, upon the lines of defense, between the bastions, before the curtain, composed of two faces, and sometimes of two flanks and a small curtain.

Tenaillons. In fortification, are works sometimes found constructed in an old fortress, on each side of the ravelin,—the short faces being traced, on the prolongations of the faces of the ravelin, from the counter-scarp of its ditch; the long faces are directed for flanking defense, to about the middle of the faces of the bastions.

Demi-tenaillons are very similar to tenaillons, excepting that their short faces are directed, perpendicular to the faces of the ravelin, about one-third or one-half down from the flanked angle.

Tencteri, or Tenctheri. A people of Germany, dwelling on the Rhine between the Ruh and Sieg, south of the Usipetes, in conjunction with whom their name usually occurs. They crossed the Rhine together with the Usipetes, with the intention of settling in Gaul; but they were defeated by Cæsar with great slaughter, and those who escaped took refuge in the territories of their southern neighbors, the Sygambri. The Tencteri afterward belonged to the league of the Cherusci, and at a still later period they are mentioned as a portion of the confederacy of the Franks.

Tenedos. A small island belonging to Turkey, in the northeast of the Ægean Sea, off the coast of the Troad. It appears in the legend of the Trojan war, as the station to which the Greeks withdrew their fleet in order to induce the Trojans to think they had departed, and to receive the wooden horse. In the Persian war it was used by Xerxes as a naval station. It afterward became a tributary ally of Athens, and adhered to her during the whole of the Peloponnesian war, and down to the peace of Antalcidas, by which it was surrendered to the Persians. At the Macedonian conquest, the Tenedians regained their liberty. In the war against Philip III., Attalus and the Romans used Tenedos as a naval station, and in the Mithridatic war, Lucullus gained a naval victory over Mithridates off the island. About this time the Tenedians placed themselves under the protection of Alexandria Troas.

Tennessee. A Central State of the American Union, and third admitted under the Federal Constitution. It is bounded on the north by Kentucky and Virginia, and on the south by Georgia, Alabama, and Mississippi. The early settlers of Tennessee were slaughtered by Cherokee Indians in 1764; but in 1766 a settlement was formed near Knoxville, then a part of North Carolina. Nashville was settled near the close of the Revolution; in 1790, Tennessee was organized as a Territory with Kentucky, and in 1796 was admitted into the Union as a separate State. In January, 1861, a proposal to secede from the Union was defeated, but in June it was carried by a majority of 57,667. In ten months the State raised 50 regiments for the Confederacy; 5 or 6 were also raised for the Union. The State was the scene, at Knoxville and Chattanooga, of some of the most important operations of the war, and eventually almost the whole State became a battle-ground. The State was readmitted into the Union in 1866.

Tenney. In heraldry, orange color, one of the tinctures enumerated by heralds, but not of frequent occurrence in coat-armor. It is indicated in engravings by lines in bend sinister, crossed by others barways.

Tent (Lat. *tentorium*, from *tentus*, "stretched"). A pavilion or portable lodge consisting of canvas or other coarse cloth, stretched and sustained by poles; used for

sheltering persons from the weather, especially soldiers in camp. The early Greek, and afterward the Macedonian tents, were small coverings of skin, under each of which two soldiers slept. Alexander the Great is said to have had a pavilion of extraordinary magnificence, which could contain 100 beds. The Roman soldiers seem to have used two sorts of tents,—one, a tent proper, of canvas or some analogous material, and constructed with two solid upright poles, and a roof-piece between them; the other more resembling a light hut, of a wooden skeleton, covered by bark, hides, mud, straw, or any material which afforded warmth. The Roman tent held 10 soldiers, with their *decanus*, or corporal. Modern military tents are all made of linen or cotton canvas, supported by one or more poles, according to shape, and held extended by pegs driven into the ground. The tents used in the military service of the United States comprise the following:

Common, or A tent, for the use of enlisted men, is 6 feet 10 inches in height, 8 feet 4 inches in width, and 6 feet 10 inches long; it holds 6 men.

The officers' tents are somewhat larger than the common tents, and are supplied with low side-walls of canvas; they are generally called *wall-tents*.

The *tente-d'abri*, which was introduced into the American from the French service, with some modifications, consists of a tissue of cotton-cloth impregnated with caoutchouc, and thus made water-proof. Every man carries a square of this cloth, with buttons and button-holes around, by which it is attached to the squares carried by his comrades; 8 men generally sleep together in a tent made of those pieces.

The *Sibley tent* (invented by Maj. Sibley, 2d Dragoons) is conical, light, easily pitched, erected on a tripod holding a single pole, and will comfortably accommodate 12 soldiers with their accoutrements. A fire can be made in the centre of this tent, and all soldiers sleep with their feet to the fire. This tent is hardly ever used.

There is also a *hospital tent*, which is made of heavy cotton-duck. In length it is 14 feet; in width, 16 feet; in height (centre), 11 feet; with a wall 4½ feet, and a "fly" of appropriate size; the ridge-pole is made in two sections, and measures 14 feet when joined. This tent accommodates from 8 to 10 persons comfortably.

Tent. To cover with tents; to pitch tents upon; as, a tented plain.

Tent, Laboratory. In artillery, is a large tent, which is sometimes carried to the field for the conveniences of the laboratory men.

Tent-bedstead. See CAMP-BEDSTEAD.

Tentful. As much or as many as a tent will hold.

Tent-pins. Are pieces of wood, which are indented at the top, and made sharp at the bottom, to keep the cords of a tent firm to the earth.

Tent-poles. The poles upon which a tent is supported.

Teramo (anc. *Interamma*). A town of Southern Italy, in the province of Abruzzo Ultra I., at the junction of the Tordina and Vezzola, 28 miles northeast of Aquila. In the plain below Teramo took place, July 27, 1460, between the army of John, duke of Anjou, and the Milanese allies of Ferdinand I. of Aragon, one of the most sanguinary battles ever fought in Italy. After the contest at Castelfidardo (1860), Teramo was the first Neapolitan city that opened its gates and gave joyful welcome to King Victor Emmanuel.

Termini (anc. *Thermae Himærenses*). A seaport town on the north coast of Sicily, 21 miles east-southeast from Palermo, at the mouth of the river Termini. The ancient *Thermae* was founded 408 B.C. Here the Carthaginians defeated the Romans with heavy loss (260 B.C.) during the first Punic war.

Ternate. The northernmost of a chain of islands, on the west coast of Gilolo, and formerly the seat of sovereignty over all the adjacent Molucca Islands. It was taken from the Dutch by the English in 1797, but it was restored at the peace of Amiens. It was again taken in August, 1810, and once more restored to the Dutch, with their other possessions in India and the East, by the treaty of Paris in 1814.

Terre-plein. In field fortification, the plane of site or level country around a work. The terre-plein of the rampart in permanent fortification, is the broad surface which remains after constructing the parapet and banquette.

Terror, Reign of. See REIGN OF TERROR.

Tertiate. In gunnery, is to examine the thickness of the metal of a piece of artillery, in order to judge of its strength. This is usually done with a pair of caliper compasses. To *tertiat* a piece of ordnance, is to examine the thickness of the metal, in order to judge of its strength, the position of the trunnions, etc.

Teschén. A town of Austrian Silesia, on the right bank of the Olsa, 88 miles east-southeast of Troppau. Here, in 1779, a treaty of peace was concluded between Maria Theresa and Frederick II., by which the dispute of the Bavarian Succession was brought to an end.

Testri (Northern France). Pepin d'Heristal, invited by malcontents, here defeated and captured Thierry III., king of Austrasia, and established himself as duke, 687.

Testudo (*Testude*). In ancient warfare, was a defensive arrangement of the shields, by means of which a body of men advancing against a wall for assault or mining, sought to protect themselves from the darts and weapons of the defenders. The men standing in close order, joined their shields above their heads, the edges overlapping, until the whole resembled the shell of a tortoise (*testudo*). The name was also applied to a ma-

chine moving on wheels, and roofed over, under which soldiers worked in undermining or otherwise destroying the walls in a siege.

Tête-de-pont (*Fr.*). A field fortification in front of a bridge, to cover the retreat of an army across a river. They are generally formed in the shape of a redan, a system of crémaillères, horn- or crown-works, or portions of star-and-bastioned forts. In order to add to the defense of *têtes-de-pont*, reduits have been constructed within them, and the dimensions of their parapets are in general made larger than those of any other field-work, on account of their great importance. Sometimes the area inclosed by a *tête-de-pont* is temporarily made use of as a depot for the stores necessary for the troops, in which case its tracing should present a strong point of defense, well provided with artillery, and affording in several points egress. The tracing which has been found the best for the passage of extensive trains of wagons and artillery, as well as columns of troops, is formed of crémaillères, extending in such a manner as to inclose a large area, and leaving behind each a passage well guarded and secured by second crémaillères, fronting the passage, and forming a second line. Additional strength will be given to *têtes* of every kind by constructing small redans or batteries on the opposite side of the river, the fire from which may defend the ground in front of the salient, and flank the faces of the *tête-de-pont*.

Tettenhall (Staffordshire). It was probably at this place, then named Testenheal, that the Danes were defeated by the Anglo-Saxons sent against them by Edward the Elder, August 6, 910.

Tetuan. A seaport town on the north coast of Africa, 22 miles south of Ceuta. It was taken by the Spaniards under O'Donnell, February, 1860; and the treaty of Madrid, by which the city was evacuated in favor of the Spaniards, was concluded October 30, 1861.

Teutoburg Forest. Probably situated between Detmold and Paderborn, in North Germany, where Hermann, or Arminius, and the Germans defeated the Romans under Varus with great slaughter in the year 9. This defeat was regarded at Rome as a national calamity.

Teutonic. A term applied to a group of nations, as well as languages, forming an important division or stem of the Aryan family. Of the various tribes and nations spoken of as inhabiting Northern Europe in ancient times, it is often difficult to determine which were really of Germanic race, and which Celtic or Slavic. Of undoubted German nations who took part in the destruction of the Roman empire the most prominent were the Goths (which see), Lombards (which see), Vandals (which see), and Franks (which see). The term Teutonic is derived from *Teutones*, the name of a nation or tribe first mentioned by Pytheas, who

wrote about 320 B.C., as then inhabiting a part of the Cimbric Chersonesus, or Jutland. For the next 200 years there is no further mention of the Teutones, that is, not until 118 B.C., when they appear in history as ravaging Gaul, and in conjunction with the Cimbri and Ambrones, threatening the very existence of the Roman republic. The Cimbri having gone into Spain, the Teutones and Ambrones were at length defeated by C. Marius in a great battle at Aqua Sextiae, in Gaul, 102 B.C. A similar victory was gained by Marius in the following year over the Cimbri in the plains of Lombardy.

Teutonic Knights. One of the more celebrated of the military and religious orders to which the Crusades gave birth. The sufferings of the Christian soldiers at the siege of Acre excited the sympathy of certain merchants of Bremen and Lübeck, who rendered such important services by the erection of hospitals and otherwise, that Duke Frederick of Suabia, with the sanction of Pope Clement III. and the emperor Henry VI., enrolled them in an order of knighthood. The habit of the order was a white mantle with a black cross; and the knights took vows of poverty and chastity, which in later times were not very strictly interpreted. In the course of the 13th century, they were, with the sanction of the pope, engaged in a bloody war to enforce Christianity on the heathen nations inhabiting the southern shores of the Baltic, which resulted in the acquisition by the order of Prussia, Livonia, Courland, and other adjoining territories. Warriors from all parts of Europe in that and the following century joined their standard, including Henry IV. of England, accompanied by 300 attendant knights and men-at-arms. The conquests of the order raised it to the rank of a sovereign order, with a territory extending from the Oder to the Baltic, and embracing a population of between 2,000,000, and 3,000,000, the grand master having his seat at Marienburg, Prussia. The decline of the order began in the 15th century, and its fall was brought about partly by internal dissensions, and partly by the attacks of neighboring states. At the peace of Presburg in 1805, the emperor of Austria obtained the rights and revenues of the grand master, but in 1809 the order was abolished by Napoleon, its lands passing to the sovereigns in whose dominions they lay. The Teutonic order, however, still continues to preserve a titular existence in Austria.

Tewkesbury. A town of England, in Gloucestershire, on the Avon, and near its confluence with the Severn, 10 miles north-east from Gloucester. It is a very ancient town. Within a mile of it was fought (May 14, 1471) the famous battle of Tewkesbury, in which the Yorkists under Edward IV. and Richard III. inflicted a signal defeat on the Lancastrians.

Texas. One of the southwestern of the United States of America, is bounded on

the southwest by Mexico, from which it is separated by the Rio Grande, and on the east by Arkansas and Louisiana. La Salle, the French explorer, erected a fort on Matagorda Bay, 1687. A Spanish settlement and mission was formed in 1690, but soon abandoned. In 1715, the country was settled by the Spaniards under the name of New Philippines, and several missions established; but the Comanche and Apache Indians, among the most warlike in America, and still the terror of the border settlements, hindered the progress of the country. In 1803, when Louisiana was ceded by France to the United States, Texas, claimed by both Spain and the United States, became a disputed territory. From 1806 to 1816, settlements were formed, and several attempts made to wrest the country from Spain. In one of these, in 1813, 2500 Americans and Mexicans and 700 inhabitants of San Antonio were killed. Mina, a Spanish refugee, gained some successes, but was defeated and shot. Lafitte, a Gulf pirate, made a settlement at Galveston in 1815, but it was broken up in 1821. In 1820, Moses Austin, an American, got a large tract of land from the Mexican government, and began a settlement, which rapidly increased; but many of the settlers were of so lawless a character, that in 1830 the government forbade any more Americans coming into Texas. In 1833, a convention of settlers, 20,000 in number, made an unsuccessful attempt to form an independent Mexican state; and in 1835 a provisional government was formed, Sam Houston chosen commander-in-chief, and the Mexicans driven out of Texas. Santa Anna, president of Mexico, invaded the country with an army of 7500, but after some successes was entirely routed at San Jacinto, April 21, and Texas became an independent republic, acknowledged in 1837 by the United States, and in 1840 by England, France, and Belgium. In December, 1845, Texas was annexed to the United States, but was invaded by Mexico, which had never acknowledged its independence. A war followed (1846-48) in which Mexico was defeated. In February, 1861, Texas joined the Secession, and furnished many soldiers and immense supplies to the Confederate armies. In February, 1866, the ordinance of secession was annulled, and in 1870 the reconstruction was completed, and regular civil government restored.

Thanks. Public acknowledgments for gallant actions.

Thapsus (ruins at *Demas*). A city on the east coast of Byzacena, in Africa Propria, where Caesar finally defeated the Pompeian army, and finished the civil war, 46 B.C.

Thasos (now *Thaso*, or *Tasso*). An island in the Grecian Archipelago, belonging to Turkey, off the coast of Roumelia, 80 miles north-northeast of Mount Athos. It was at a very early period taken possession of by the Phœnicians on account of its gold

mines. Thasos was afterwards colonized by the Parians, 708 B.C. Before the Persian conquest, the Thasians were one of the richest and most powerful tribes in the north of the Ægean. They were subdued by the Persians under Mardonius, and subsequently became part of the Athenian maritime empire. They revolted, however, from Athens in 465 B.C., and after sustaining a siege of three years were subdued by Cimon in 463. They were obliged to surrender to the Athenians all their possessions in Thrace, to destroy their fortifications, to give up their ships, and to pay a large tribute for the future. They again revolted from Athens in 411, and called in the Spartans, but the island was again restored to the Athenians by Thrasybulus in 407.

Thaulache (*Fr.*). Armor and weapons of the ancient French, consisting of small shields (*rondelles*), and halberd or spear.

Theatre of Operations. See **STRATEGY**.

Theatre of War. The term for any extent of country in which war is carried on. It is synonymous with "seat of war."

Theban Legion. According to tradition, was totally composed of Christians, and consequently submitted to martyrdom rather than attack their brethren during the persecution of the emperor Maximin, or sacrifice to the gods, about 286. Their leader was canonized.

Thebes. The name of a celebrated city; it was formerly the capital of Upper Egypt; it is now in ruins. It revolted against Ptolemy Lathyrus, and was captured after a siege of three years, in 82 B.C.

Thebes (now *Theba*). The chief city of Bœotia, in ancient Greece, was situated in a plain southeast of the Lake Helice, and northeast of Plateæ. The territory of Thebes was called *Thebais*, and extended eastward as far as the Eubœan Sea. It was the scene of one of the most celebrated wars in the mythical annals of Greece. Polynices, who had been expelled from Thebes by his brother Eteocles, induced six other heroes to espouse his cause, and marched against the city; but they were all defeated and slain by the Thebans. This is usually called the war of the "Seven against Thebes." A few years afterward, "the Epigoni," or descendants of the seven heroes, marched against Thebes to revenge their fathers' death; they took the city and razed it to the ground. It appears, however, at the earliest historical period as a large and flourishing city. The Thebans were from an early period inveterate enemies of their neighbors, the Athenians. Their hatred of the latter people was probably one of the reasons which induced them to desert the cause of Grecian liberty in the great struggle against the Persian power. In the Peloponnesian war the Thebans naturally espoused the Spartan side, and contributed not a little to the downfall of Athens; but they joined the confederacy formed against Sparta in 394 B.C. The peace of Antalcidas in 387 put an

end to hostilities in Greece; but the treacherous seizure of the Cadmea by the Lacedæmonian general Phœbidas in 382, and its recovery by the Theban exiles in 379, led to a war between Thebes and Sparta, in which the former not only recovered its independence, but forever destroyed the Lacedæmonian supremacy. This was the most glorious period in the Theban annals; and the decisive defeat of the Spartans at the battle of Leuctra in 371 made Thebes the first power in Greece. Her greatness, however, was mainly due to the pre-eminent abilities of her citizens, Epaminondas and Pelopidas; and with the death of the former at the battle of Mantinea in 362, she lost the supremacy which she had so recently gained. The Thebans joined the Athenians in protecting the liberties of Greece; but their united forces were defeated by Philip of Macedon, at the battle of Chæronea, in 338. Soon after the death of Philip and the accession of Alexander, the Thebans made a last attempt to recover their liberty, but were cruelly punished by the young king. The city was taken by Alexander in 336, and was almost entirely destroyed; 6000 inhabitants were slain, and 30,000 sold as slaves. In 316 the city was rebuilt by Cassander, with the assistance of the Athenians. In 290 it was taken by Demetrius Poliorcetes, and again suffered greatly.

Theodolite. An instrument, variously constructed, used, especially in trigonometrical surveying, for the accurate measurement of horizontal angles, and also usually of vertical angles. The theodolite consists principally of a telescope, with cross-wires in its focus, mounted so as to turn both on vertical and horizontal axes, the former carrying a horizontal vernier-plate over a graduated plate or circle for aximuthal angles, and the latter a vertical, graduated arc or semicircle for altitudes,—the whole furnished with leveling-screws and levels for adjusting to the horizon, and mounted on a tripod. It is usually so constructed that a horizontal angle may be repeated indefinitely around the limb, and thus a large number of repetitions added mechanically, to secure greater accuracy in the resulting mean.

Thermidor (*i.e.*, the "Hot Month"). Formed in the calendar of the first French republic the eleventh month, and lasted from July 19 to August 18. The 9th Thermidor of the Republican year 2 (July 27, 1794) is memorable as the date of Robespierre's fall, and the termination of the "Reign of Terror." The name of Thermidorians was given to all those who took part in this fortunate *coup d'état*, but more particularly to those who were desirous of restoring the monarchy.

Thermopylæ (literally, "the hot gates"). A famous pass leading from Thessaly into Locris, and the only road by which an invading army can penetrate from Northern into Southern Greece. Leonidas, at the head

of 300 Spartans and 700 Thespians, at this pass withstood the whole force of the Persians during three days, August 7, 8, and 9, 480 B.C., when Ephialtes, a Trachinian, perfidiously leading the enemy by a secret path up the mountains, brought them to the rear of the Greeks, who, thus placed between two assailants, perished gloriously on heaps of their slaughtered foes. One Greek only returned home, and he was received with reproaches for having fled. Here also, Antiochus the Great, king of Syria, was defeated by the Romans, 191 B.C.

Thermum, **Thermus**, or **Therma**. A strong city, the acropolis of Ætolia, Northern Greece, was captured and ravaged by Philip V. of Macedon, 218 and 206 B.C., on account of its favoring the Romans.

Thespie. A city of Boeotia, Northern Greece; 700 of its citizens perished with Leonidas at Thermopylae, August, 480 B.C. It suffered much through the jealousy of the Thebans, who destroyed its walls in 872 B.C.

Thessalonica (now *Saloniki*, more anciently *Therma*). An ancient city of Macedonia, situated at the northeast extremity of the Sinus Thermaicus. It was taken and occupied by the Athenians a short time before the commencement of the Peloponnesian war (432 B.C.), but was soon afterward restored by them to Perdiccas. At a later time, it became the capital of the Illyrian provinces. It is celebrated at this period on account of the fearful massacre of its inhabitants by order of Theodosius, in consequence of a riot in which some of the Roman officers had been assassinated by the populace.

Thessaly. The largest division of ancient Greece, lay to the south of Macedonia, and to the east of Epirus. Thessaly was originally inhabited by Æolians, who, however, were either expelled or reduced to slavery by immigrants from Epirus about 1000 B.C. The inhabitants of Thessaly have been divided into three classes: (1) There were the Epirote conquerors; (2) those descendants of the original inhabitants, who, although dependent on the nobles, yet possessed a few privileges; and (3) the *Penestæ*, or those of the original inhabitants who had been reduced to serfdom. Thessaly never played an important part in Grecian history; it was only after the Peloponnesian war it exercised any influence on the affairs of Greece. The *Penestæ* frequently rebelled against their masters, who were very frequently at war among themselves. Jason caused himself to be elected *Tagus* of all Thessaly about 374 B.C.; was assassinated in 370 B.C. The rule of Jason's successors became so unbearable that, in 358 B.C., the old families called in the aid of Philip of Macedon, who, in 344, subjected the country to Macedonia. In 197 B.C., it was restored to freedom under the protection of Rome.

Thetford. A town of England, in Norfolk, 95 miles north-northeast of London. It was taken and sacked by the Danes in 870.

Thin, To. To make less numerous; as, to thin the ranks by a heavy discharge of musketry.

Thionville. A fortified town of France, in the department of the Moselle, situated on the Moselle, which is crossed here by a splendid bridge. This place was a residence of the Merovingian and Carolingian kings, and was repeatedly besieged during the various wars between Austria and France. It was invested by the Germans in August, 1870, and after bombardment, being in flames, surrendered November 24 following.

Thirty, **Battle of** (*Fr. Combat des Trentes*). A name given, in English and French history, to a celebrated engagement which took place at a spot known as Midway Oak, halfway between the castles of Josselin and Ploermel, France, March 27, 1351. The French general Beaumanoir, commanding the former post, being enraged at the depredations committed by Bemborough, the English general, challenged him to fight. Upon this it was agreed that thirty knights of each party should meet and decide the contest. The two chiefs presented themselves at the head of their best soldiers and the battle began in earnest. At the first onset the English were successful; but Bemborough having been killed, the French renewed the struggle with redoubled courage and finally won the victory. This was one of the most heroic exploits of the age, and gained such popularity that more than one hundred years later, when speaking of a hard contest, it was usual to say, "There never was such hard fighting since the battle of the Thirty."

Thirty Tyrants. A body of thirty magistrates in Athens (404-403 B.C.). They were appointed from the aristocratic party, by the Spartans, victorious in the Peloponnesian war. The "tyrants" were guilty of the most cruel and shameless acts, and after one year were expelled by Thrasybulus.

Thirty Tyrants of Rome. A set of military adventurers who from 253 to 268 attempted to establish their own power in various parts of the empire during the reigns of Valerianus and Gallienus. The number thirty is borrowed from that of the famous Athenian tyrants. The names of only nineteen of these adventurers have come down to us.

Thirty Years' War. Was not properly one war, but rather an uninterrupted succession of wars (1618-1648) in Germany, in which Austria, the most of the Catholic princes of Germany, and Spain, were engaged on one side throughout, but against different antagonists. This long-continued strife had its origin in the quarrels between the Catholics and Protestants of Germany, and the attempts of the former, who were the more powerful body, to deprive the latter of what liberty of worship they had obtained. The severe measures taken by the emperor, the head of the Catholic party, against the Protestant religion, led also to

strictures on their civil rights; and it was to protect their political as well as their religious liberties, that the Protestants formed a union, May 4, 1608, with Frederick IV., the Elector Palatinate, at its head. The rival union of the Catholic powers, under the leadership of the Duke of Bavaria, followed July 11, 1609. In Bohemia, the immense preponderance in numbers (two out of three) and influence of the Protestants, had forced from their Austrian king an edict of toleration (July 11, 1609), which was at first faithfully observed; but during the reign of Matthias, sundry violations of it were made with impunity; and as the influence of Ferdinand of Styria, his successor, began to be felt in more flagrant partiality to the Catholics, the kingdom became a scene of wild excitement; three of the Catholic party were thrown from the window of the Bohemian council-chamber at Prague, and ultimately Ferdinand was deposed, and Frederick V., the Elector Palatinate, chosen in his stead (1619); and Count Thurn, at the head of an insurgent army, repeatedly routed the imperial troops, and actually besieged the emperor in Vienna. The Catholic princes, though as apprehensive as their opponents of the encroaching policy of Austria, crowded to the emperor's aid; and while the Protestant union and James I. of Great Britain held aloof from Frederick, whose sole allies were Bohemians (under Thurn), Moravians, Hungarians, and a Piedmontese contingent of 8000 (under Count Mansfield), a well-appointed army of 30,000, under Duke Maximilian, advanced to support the Austrians, and totally routed Frederick's motley array at Weissenberg (November 8, 1620), near Prague, afterwards reducing the Upper, while an army of Spaniards under Spinola ravaged the Lower, Palatinate, and the Saxons (in alliance with the emperor) occupied Lusatia. The Bohemians were now subjected to the most frightful tyranny and persecution; a similar policy, though of a more modern character, was adopted towards the people of the Palatinate,—the Protestant union standing aloof, and subsequently dissolving, through sheer terror. But the indomitable pertinacity and excellent leadership of Count Mansfield and Christian of Brunswick, two famous partisan leaders, who ravaged the territories of the Catholic league, and the forced cession to Bethlem Gabor of large portions of Hungary and Transylvania, did much to equalize the success of the antagonistic parties. Here the war might have ended; but the fearful tyranny of Ferdinand over all the Protestants in his dominions (Hungary excepted) drove them to despair, and the war advanced to its second phase. Christian IV. of Denmark, smarting under some injuries inflicted on him by the emperor, and aided by a British subsidy, came to the aid of his German co-religionists in 1624, and being joined by Mansfield and Christian of Brunswick, advanced into Lower Saxony, while the emperor, hampered

by the political jealousy of the Catholic league, was unable to oppose him. But when, by the aid of Wallenstein, a powerful and effective army had been obtained, and the leaguers under Tilly, in co-operation with it, had marched northwards, the rout of the Danes by Tilly at Lutter (August 17, 1626), and of Mansfield by Wallenstein at Dessau (April 1, 11, and 25, 1626), again prostrated the Protestants' hopes in the dust; yet a gleam of comfort was obtained from the victorious raid of Mansfield through Silesia, Moravia, and Hungary, though his scheme for an insurrection in Hungary failed, and his death soon after, at Zara, freed the emperor from a formidable and irreconcilable enemy. The combined Imperialists and leaguers mean time had overrun North Germany and continental Denmark, and ultimately compelled King Christian to conclude the humiliating peace of Lübeck (May 12, 1629). This second great success seems to have turned Ferdinand's head, for, not content with still more rigorous treatment of the Protestants, and the promulgation of the *Restitution Edict*, which seriously offended even the Catholics, he stirred up Poland against Sweden, and insulted Gustavus Adolphus, both personally and in the persons of his ambassadors,—insolent impertinences which he soon saw bitter reason to regret. The Catholic league now forced him to reduce his army, and supplant Wallenstein by Tilly; while France was inciting Gustavus to the willing task of aiding the Protestants in Germany. The war entered its third phase by the landing of the Swedes at Usedom (June, 1630), and their conquest of Pomerania and Mecklenburg. Gustavus, by the exercise of a little wholesome pressure, induced the elector of Brandenburg to aid him; and though unable to save Magdeburg, he marched to join the Saxons, completely routed by Tilly at Breitenfeld (September 17, 1631); victoriously traversed the Main and Rhine valleys; again routed Tilly on the Lech (April 5, 1632), and entered Munich. By the judicious strategy of Wallenstein, he was compelled to return to Saxony, where he gained the great victory of Lützen; but his death, depriving the Protestants of the only man who could force the confederate powers to preserve unity of action, was a severe blow to their cause; though the genius and indefatigable zeal of his chancellor, Oxenstiern, and the brilliant talents of the Swedish generals, preserved the advantages they had gained, till the crushing defeat of Bernard of Weimar at Nordlingen (September 6, 1634) again restored to the emperor a preponderating influence in Germany. Saxony now made peace at Prague (May 30, 1635), obtaining such satisfactory terms for the Lutherans that the treaty was within three months adhered to by all the German princes of that sect, and the Calvinists were left to their fate. Final success now appeared to demand only one more strenuous effort on the part of Austria; but Oxenstiern resolved

to preserve to Sweden her German acquisitions, propitiated Richelieu, by resigning to him the direction of the war, and the conflict advanced into its final and most extended phase. The emperor, allied for offense and defense with the Lutherans, was now also assailed through his ally, Spain, who was attacked on her own frontier, in the Netherlands, and in Italy; Bernard of Weimar fighting independently, with the view of obtaining Alsace for himself, opposed the leaguers; while the Swedes under Banér held North Germany, and by frequent flying marches into Silesia and Bohemia distracted their opponents, and prevented them, after successes over Duke Bernard, from proceeding with the invasion of France. The great victory of Banér over the Austrians and Saxons at Wittstock (October 4, 1636) restored to Sweden the victor's wreath she had lost two years before; and from this time, especially under Torstenson and Königsmark, the Swedes were always successful, adding a second victory of Breitenfeld (November 2, 1642), one at Yankowitz (February 14, 1645), and numberless ones of less note, to their already long list of successes, carrying devastation and ruin into the hereditary territories, even to the gates of Vienna, defeating the best generals of the empire, till, from a profound feeling of inability to check them, the Austrians hardly dared appear to the north of the Danube. On the Rhine, the leaguers at first had great success,—the Weimar troops, now in French pay, were almost exterminated at Duttlingen (November 24, 1643); but after the Spanish power had been thoroughly broken in the Netherlands by Condé, the French were reinforced on the Rhine, and under Condé and Turenne, rolled back the leaguers through the Palatinate and Bavaria, and revenged at Nordlingen (August 3, 1645) the former defeat of the Swedes. The emperor was now deserted by all his allies except the Duke of Bavaria, whose territories were already mostly in the hands of Turenne and Wrangel; and a combined invasion of Austria from the west and north was on the point of being executed, when, after seven years of diplomatic shuffling, with an eye to the changing fortunes of the contest, the peace of Westphalia put an end to this terrible struggle.

Thistle, Order of the. See **ANDREW, St. Thomas, St.** The principal of the Virgin Islands in the West Indies, belonging to Denmark. In March, 1801, it was taken by the British, but given up at the peace of Amiens; it was again taken in the course of the subsequent war, and restored to Denmark at the peace of Paris in 1814.

Thorn. A fortified town of the kingdom of Prussia, in the province of West Prussia, on the right bank of the Vistula. It is defended by walls, bastions, and two forts. This town was founded by the Teutonic Knights in 1282, and admitted into the Hanseatic League in the beginning of the

14th century. It was taken by Charles XII. of Sweden in 1703, after a siege of four months.

Thrace. Anciently the name of an extensive country bounded on the north by the Danube, on the east by the Euxine, on the south by the *Ægean* and Macedonia, and on the west by Macedonia and Illyria. War and robbery were the only honorable occupations of the Thracians. They lived to steal, either from each other or from neighboring peoples. When not fighting or plundering, they spent their days in savage idleness, or in quarreling over their cups. Courageous, or rather ferocious, after the fashion of barbarous peoples, they yet lacked the steady valor and endurance of disciplined troops; at all times, their warfare displayed more fierceness and impetuosity than fortitude. In 518 B.C., Darius, king of Persia, marched through Thrace on his way to punish the European Scythians, and on his return left Megabazus with 80,000 men to subdue the country. In this he partially succeeded, but new disturbances and complications arose between the Persians and Greeks, which resulted (480 B.C.) in the famous expedition of Xerxes. The consequence of the expulsion of the Persians from Europe was the resumption of liberty and the revival of prosperity among the Greek colonies in Thrace. Shortly before the Peloponnesian war, a native Thracian state—the *Odrysian*—had attained to great power and eminence under a ruler named Sitalces, who joined the Athenian alliance, but could not, in spite of his resources, prevent the triumph of Sparta in the north as well as in the south. The rise of the Macedonian kingdom, under Philip II. (359 B.C.), destroyed the independence of a great part of Thrace. Under the government of Lysimachus, the subjugation of Thrace became complete. On the fall of the Macedonian kingdom (168 B.C.) it passed into the hands of the Romans, and subsequently shared the vicissitudes of the Roman empire. In 334 a colony of Sarmatians, and in 376 another of Goths, was planted in Thrace. In 395 it was overrun by Alaric, and in 447 by Attila. In 1858, Amurath obtained possession of all its fortresses, except Constantinople, and it has ever since remained in the possession of the Turks.

Thrasimenus Lacus. See **TRASIMENUS LACUS.**

Throw, To. To force anything from one place to another; thus, artillerymen say, to throw a shot or shell, or so many shells were thrown.

Thrust. Hostile attack with any pointed weapon, as in fencing. When one party makes a push with his sword to wound his adversary with the point, it is called a thrust.

Thud. The sound of a bullet on hitting the intended object.

Thug. One of an association of robbers and murderers in India, who practiced murder not by open assault, but by stealthy

approaches, and from religious motives. They have been nearly exterminated by the British government.

Thumb-stall. See **IMPLEMENTS**.

Thunderbolt. In heraldry, a bearing borrowed from classical mythology, which may be described as a twisted bar in pale inflamed at each end surmounting two jagged darts in saltire between two wings displayed with streams of fire.

Thundering Legion. During a contest with the invading Marcomanni, the prayers of some Christians in a Roman legion are said to have been followed by a storm of thunder, lightning, and rain, which tended greatly to discomfit the enemy; and hence the legion received the name in 174.

Thurii, or Thurium. A Greek city in the south of Italy, on the north shore of the Tarentine Gulf, was founded in 452 B.C., by a body of Sybarite exiles, near the spot where their ancient city had stood till it was destroyed by the Crotonians fifty-eight years before. The rise of a new colony re-awakened the anger of the Crotonians, and after five years they expelled the Sybarites. These after an unsuccessful appeal to Sparta for assistance, applied to the Athenians, who resolved to send out a colony along with the persecuted Sybarites. The leaders of this colony were Lampon and Xenocritus. A war subsequently occurred between Thurii and Tarentum, but was terminated by a compromise. In 390 B.C. the city received a severe blow from a total defeat of their army by the Lucanians. From this period it began to decline, and was at length obliged to submit to the Roman power, in order to escape the continued attacks of the Lucanians.

Thuringia. An early Gothic kingdom in Central Germany, was overrun by Attila and the Huns, 451; the last king, Hermanfried, was defeated and slain by Thierry, king of the Franks, who annexed it to his dominions, 580. It was after various changes and many conflicts, absorbed in Saxony in the 16th century. In 1815 it was surrendered to Prussia.

Thyatira. In Asia Minor; was the place assigned for the battle at which the rebel Procopius was defeated by the army of the emperor Valens in 366.

Thymbra. In Asia Minor, where Cyrus the Great defeated the confederate army aiding Croesus, and obtained supremacy in Asia, 548.

Tiberias. A city in Palestine, built by Herod Antipas, and named after the emperor Tiberias in 39. Near it Guy de Lusignan, king of Jerusalem, and the Crusaders, were defeated by Saladin; and Jerusalem fell into his hands, 1187.

Ticino, or Tessin. A Swiss canton south of the Alps; it was conquered by the Swiss early in the 16th century, and made a separate canton in 1815. It suffered by internal disputes in 1839 and 1841.

Ticinus (now Tessino). An important

river in Northern Italy. It was upon the bank of this river that Hannibal gained his first victory over the Romans by the defeat of P. Scipio, 218 B.C.

Ticonderoga. A town in Essex Co., N. Y., 95 miles north by east of Albany. Two or three miles below this village are the ruins of old Fort Ticonderoga, on the west shore of Lake Champlain. The fort was surprised by Col. Ethan Allen in the Revolutionary war.

Tien Tsin. A city of China, situated 70 miles southeast from Peking. A treaty of amity and commerce was signed here between the French and English on the one hand, and the Chinese on the other, in 1858. The violation of this treaty, which was favorable to British interests in China, by the Chinese, was the cause of the subsequent Chinese war.

Tierce. A thrust in fencing, delivered at the outside of the body over the arm.

Tierce, Tiercé. In heraldry, a term of blazon used to indicate that the field is divided by lines into three equal parts. A shield may be tierce in pale, in fess, in bend, in bend sinister, or in pall; all which, with other arrangements in tierce, are common in French heraldry. Tierce in pale, in English heraldry, is an occasional mode of marshaling three coats in one escutcheon under special circumstances.

Tier-shot. Grape-shot is sometimes so called.

Tiflis. See **TEFLIS**.

Tige-arms. Sometimes called pillar breech-arms. Arms with a stem of steel, screwed into the middle of the breech-pin, around which the charge of powder is placed. The ball enters free and rests upon the top of the pin, which is tempered, and a few blows with a heavy ramrod force the ball to fill the grooves of the rifled arm. This invention was an improvement by Capt. Thouvenin on Delvignes' plan of having a chamber for the powder smaller than the bore. Capt. Minié's invention superseded the tige-arms, by means of a bullet which is forced to fill the grooves by the action of the charge itself at the instant of the explosion.

Tigranocerta (ruins at Sert). The later capital of Armenia, built by Tigranes. It was taken by Lucullus and the Romans, after a great victory over Tigranes, in 69 B.C.

Tigurini. A tribe of the Helvetii, who joined the Cimbri in invading the country of the Allobroges in Gaul, where they defeated the consul L. Cassius Longinus, 107 B.C. They formed in the time of Caesar the most important of the four cantons into which the Helvetii were divided.

Tilsit. A town of East Prussia, on the left bank of the Niemen, or Memel, 60 miles northeast from Königsberg. Tilsit will be ever memorable in history for the treaties which were there signed between France and Russia on July 7, and France and Prussia on July 9, 1807. By the former of these

Napoleon agreed to restore to the king of Prussia a great portion of his dominions, his Polish acquisitions being joined to Saxony, and his possessions west of the Elbe formed into the nucleus of the new kingdom of Westphalia; Danzig was declared an independent city; the Prussian province of Bialystock was ceded to Russia; the dukes of Oldenberg and Mecklenburg, the czar's relatives, were reinstated by Napoleon, and in return the Bonapartist kings of Naples and Holland were recognized by the czar, etc. By the latter, the king of Prussia recognized the kings of Holland, Naples, and Westphalia, and the Confederation of the Rhine; agreed to the cessions laid down in the Russian treaty, and to other minor alienations and concessions to Saxony, amounting in all to nearly one-half of his dominions; to the exclusion from his harbors of the commerce of Great Britain, and to the occupation of the Prussian fortresses by the French, till the payment of an enormous ransom. The weighty importance of the alterations effected by this treaty is, however, dwarfed before the startling magnitude of the *secret provisions* signed between France and Russia. By these were arranged the resignation of the empire of the East to Russia, Roumelia and Constantinople being specially excepted by Napoleon, and the acquisition of the Spanish peninsula by France; the two powers were to make common cause against Great Britain, and were to force the three courts of Stockholm, Copenhagen, and Lisbon to join them; and Napoleon agreed to increase no further the power of the duchy of Warsaw, and to do nothing which might lead to the re-establishment of the Polish monarchy. By a further agreement, not put formally into writing, the mouths of the Cattaro, the Ionian Isles, Sicily, Malta, Egypt, and the papal dominions were to be taken by France; and Greece, Macedonia, Dalmatia, and the Adriatic coasts, as the portion of Turkey; while on the other hand, Russia was to obtain the rest of Turkey, and was allowed to seize Finland. These secret articles are given on most excellent authority, and their correctness is further vouched for by the conduct of France and Russia for the next few years.

Tilt. A thrust, or fight with rapiers; also, an old military game.

Tilted Steel. See **ORDNANCE, METALS FOR, STEEL.**

Tilter. One who fights or contests in a tournament.

Tilting-helmet. A helmet of large size often worn over another at tilts.

Tilt-yard. Formerly a place or yard for tilting.

Timariot. A Turkish cavalry soldier who has a certain allowance made him, for which he is not only obliged to arm, clothe, and accoutre himself, but he must likewise provide a certain number of militia-men. The allowance is called *timar*.

Timars. Certain revenues, in Turkey, growing out of lands which originally belonged to Christian clergy and nobility, and which the sultans seized when they conquered the countries they inhabited. By this means the sultan is enabled to support the *timariots*.

Timber. In heraldry, a rank or row, as of ermine, in a nobleman's coat; also a crest. This word is also written *timbre*.

Timber Rafts. See **RAFTS, TIMBER.**

Timbuctoo. A celebrated city in the interior of Africa, on the slope of a hill about 8 miles south of the Niger. It is said to have been built by Mansa Suleiman, a Mohammedan, about 1214, and was frequently subjugated by the sovereigns of Morocco. Since 1727 it has been partially independent.

Time. The measure of duration by which soldiers regulate the cadence of the march. *Common time*, the ordinary time of marching, in which 90 steps, each 28 inches in length, are taken in one minute. See **DOUBLE-QUICK**, and **QUICK TIME**.

Time. That necessary interval between each motion in the manual exercise, as well as in every movement the army or any body of men may make. In fencing there are three kinds of time: that of the sword, that of the foot, and that of the whole body.

Time. A particular period or part of duration, whether past, present, or future.

Apparent time, the time of day reckoned by the sun, or so that 12 o'clock at the place is the instant of the transit of the sun's centre over the meridian.

Mean solar time, or *mean time*, time regulated by the average, or mean, instead of the unequal or apparent motion of the sun; time as indicated by a uniformly-going clock, once rightly adjusted, and differing from apparent time at any instant by a small quantity called the *equation of time*.

Sidereal time, time regulated by the transit, over the meridian of a place, of the first point of Aries, or vernal equinox, and chiefly used in astronomical observations.

Solar time. See **MEAN SOLAR TIME.**

Time of Flight. See **FLIGHT.**

Time Thrust. In fencing, a thrust given upon any opening which may occur by an inaccurate or wide motion of your adversary, when changing his guard, etc.

Time-fuze. See **FUZE, TIME.**

Timing. In fencing, is the accurate and critical throwing in of a cut or thrust upon any opening that may occur as your adversary changes his position.

Tin-case Shot. See **CANISTER-SHOT.**

Tinchebrai. A town of France, department of the Arne, 84 miles northwest from Alençon. Here Robert of Normandy was finally defeated by his brother, Henry I. of England, on September 28, 1106, and Normandy was annexed to the crown of England.

Tincture. In heraldry, one of the metals, colors, or furs used in armory.

Tindal. An attendant on the army in India.

Tinker. A small mortar formerly used on the end of a staff, now superseded by the Coehorn.

Tippecanoe. A river of Indiana, United States, which rises in a lake of the same name in the northern part of the State. It is famous for the battle fought on its banks, November 5, 1811, in which the Indians, under Tecumseh's brother, the Prophet, were defeated by Gen. Harrison.

Tipperary. An inland county in the province of Munster, Ireland. Subsequently to the year 1172, Henry II. obtained possession of it after several sanguinary contests. The county suffered greatly during the civil wars of 1641, in the course of which the town of Clonmel, after a gallant resistance, obtained honorable terms from Cromwell, who conducted the siege in person.

Tipperary. A town of the county of the same name, on the river Arra, 111 miles southwest from Dublin. The town is of very ancient foundation, and soon after the invasion was occupied as a strong place by the English, who built a castle in it during the Irish expedition of King John. This castle, however, fell soon afterward into the hands of the Irish under the Prince of Thomond.

Tippermuir, or Tibbermore. A town of Scotland, near Perth. Here the Marquis of Montrose defeated the Covenanters under Lord Elcho, September 1, 1644.

Tirailleuse. A skirmisher, often put in front of the line to annoy the enemy, and draw off his attention; or they are left behind to amuse and stop his progress in the pursuit; a rifleman.

Tire. Are great guns, shot, shells, etc., placed in a regular form.

Tirlemont. A town of Belgium, province of Brabant, 25 miles east of Brussels. It was taken by the French in 1685; was ravaged by Marlborough in 1705; taken by the French in 1792; here the French, under Dumouriez, defeated the Austrians in 1793; taken by the French in 1794. Its fortifications were dismantled in 1804.

Tiryns. An ancient town of Argolis, southeast of Argos, and one of the most ancient in all Greece. Homer represents Tiryns as subject to Argos; the town was at a later time destroyed by the Argives, and most of the inhabitants were removed to Argos.

Titles, Military. See military titles under appropriate headings throughout this volume.

Tivoli. A town of Central Italy, on the left bank of the Teverone, 18 miles east-northeast from Rome. In the Middle Ages, Tivoli was an imperial city, independent of Rome, and was the occasion of many contentions between the emperors and the popes; in the course of which it was frequently taken and retaken as either party gained the ascendant.

Tiemsen, or Tlemecen. A town of Algeria, in the province of Oran, 67 miles southwest from Oran. It was once an important place; but in consequence of a revolt of the inhabitants against his authority, Hassan, the dey of Algiers, laid it in ruins. It was occupied by the French in 1836 and 1842.

Tobago. One of the British islands in the West Indies, belonging to the Windward group. This island was first colonized by the Dutch, who were expelled by the Spaniards. It was then settled by the English, to whom it was ceded by the peace of 1763. In 1781 it was taken by the French, and in 1798 was retaken by the British, by whom it was retained at the peace of Amiens.

Tobitschau (Moravia). In a sharp action, on July 15, 1866, the Austrians were defeated by the army of the crown-prince of Prussia, with the loss of 500 killed and wounded, and 500 prisoners and 17 guns.

Tocsin. An alarm-drum; a bell. It was formerly used in an army as a signal for charging, on the approach of an enemy.

Toga Picta. Was an outer garment, worn by Roman generals in triumphs, by consuls under the empire, and by prætors when they celebrated games; and was embellished with Phrygian embroidery. In war the toga was laid aside for the *sagum* or *paludamentum*, or some less cumbersome style of attire.

Toggle and Chain. See ORDNANCE.

Toise. A measure derived from the French, containing 6 feet, and a term of frequent use in fortification and military surveying.

Tolson d'Or (Fr.). See GOLDEN FLEECE.

Toledo (anc. *Toletum*). A city of Spain, capital of the province of the same name, on the north bank of the Tagus, 55 miles south-southwest from Madrid. It was conquered by the Romans under M. Fulvius, 192 B.C. (193 B.C.); was captured by the Goths, 467; possessed by the Moors from 714 to 1085. Alfonso VI. of Castile and Leon recovered it from the Moors.

Toledo. An esteemed Spanish sword, so called from the place of manufacture.

Tolenon (Fr.). An ancient machine of war, having a long lever moving on a pivot, suspended from an upright higher than the rampart, having at one end a box to contain 20 men, who, by drawing down the other end, might be raised high enough to fire into the loop-holes, or even to get upon the wall.

Tolentino. A town of Italy, province of Macerata, 12 miles from Macerata. It was here, in February, 1797, that the pope ceded the Romagna to the French republic by treaty, and in May, 1816, Murat retired to this place with his troops before the Austrians, and was defeated.

Tolosa. A town of Spain, province of Guipuzcoa, on the Oria, 35 miles southwest from Bayonne. Near here, Alfonso, king of Castile, aided by the kings of Aragon and Navarre, gained a great victory over the

Moors, July 16, 1212. This conflict is sometimes termed the battle of Muradal. It was occupied by the French from 1808 till 1813.

Tomahawk. A light war-hatchet of the North American Indians. The early ones were rudely made of stone, ingeniously fastened to their handles by animal sinews, or cords of skin. Traders supplied hatchets of steel, the heads of which were made hollow, for a tobacco-pipe; the handle of ash, with the pith removed, being the stem. These hatchets are used in the chase and in battle, not only in close combat, but by being thrown with a wonderful skill, so as always to strike the object aimed at with the edge of the instrument. The handles are curiously ornamented. In the figurative language of the Indians, to make peace, is to bury the tomahawk; to make war, is to dig it up.

Toman. In the East Indies, signifies 10,000 men.

Tom-tom. A large, flat drum, used by the Hindoos; a tam-tam.

Tongue. The pole of an ox-cart (local).

Tongue of a Sword. That part of the blade on which the gripe, shell, and pommel are fixed. The bayonet is figuratively called a triangular tongue, from its shape.

Tonnellon (*Fr.*). An ancient drawbridge, used nearly in the same manner and for similar purposes as the *harpe* and *ezestre*.

Tonquin, or **Tonkin**. The northernmost province of Anam, Southeast Asia. Tonquin was conquered by the Chinese in 1406, and by the Anamese in 1790.

Tooksovars (*Ind.*). The vizier's body of cavalry.

Topekhanah (*Ind.*). The place where guns are kept; the arsenal.

Topeys, or **Toppis**. Turkish artillerymen or gunners.

Topgi-Bachi. Master-general of the Turkish artillery.

Topikhannah (*Ind.*). A house for keeping guns; an arsenal; an armory.

Töplitz. A town of Bohemia. Here were signed, in 1813, two treaties,—one between Austria, Russia, and Prussia, September 9; and one between Great Britain and Austria, October 8.

Topographical Engineers. The duties of this corps consist in surveys for the defense of the frontiers and of positions for fortifications; in reconnoissances of the country through which an army has to pass, or in which it has to operate; in the examination of all routes of communication by land or by water, both for supplies and military movements; in the construction of military roads and permanent bridges connected with them; and the charge of the construction of all civil works authorized by acts of Congress, not specially assigned by law to some other branch of the service. The U. S. Corps of Topographical Engineers was merged into the Corps of Engineers in 1863.

Topography. Is the art of representing and describing in all its details the physical

constitution, natural or artificial, of any determined portion of a country; in making maps and giving a descriptive memoir. Military topography differs from geography in seeking to imitate sinuosities of ground: it represents graphically and describes technically commanding heights, water-courses, preferable sites for camps, different kinds of roads, the position of fords, and extent of woods. It enumerates the resources that a country offers to troops and the difficulties which are interposed. By means of colored maps and other conventional signs, military topography presents before the eyes of a general much that is necessary to guide his operations.

Torce, or **Wreath**. In heraldry, a garland of twisted silk, by which the crest is joined to the helmet. A crest is always understood to be placed on a torce, unless where it is expressly stated to issue out of a coronet or chapeau.

Torches. See **PYROTECHNY**.

Tordesillas. A town of Spain, province of Valladolid. Here was signed, in 1494, a treaty modifying the boundary-line which Pope Alexander VI. had assigned, in 1493, in his division of the New World between Spain and Portugal.

Torgau. A fortified town of Prussian Saxony, on the left bank of the Elbe, 70 miles south-southwest from Berlin. Here a battle was fought between Frederick II. of Prussia and the Austrians, in which the former obtained a signal victory, the Austrian general, Count Daun, a renowned warrior, being wounded, November 8, 1760. It was besieged and taken by the allied Prussians and Saxons in January, 1814; the besieged lost about 30,000 men.

Tormentum. A pistol; a gun; a piece of ordnance.

Tormes. A river of Spain, falls into the Douro, on the borders of Portugal. Its banks were the scene of many conflicts between the French and Spaniards during the Peninsular war, from 1808 to 1814.

Toro. A city of Spain, province of Leon, on the Douro, 20 miles east from Zamora. Ferdinand the Catholic defeated Alonzo V. of Portugal near this place in 1476, and gained the kingdom of Castile for himself and his wife Isabella.

Toronto. The capital of the province of Ontario, Canada, on the north shore of Lake Ontario, 165 miles from Kingston, and 823 miles from Montreal. Its harbor or bay is capable of accommodating the largest vessels that navigate the lakes, and is defended at the entrance by a fort, which was thoroughly repaired in 1864 by the imperial government, and mounted with the most efficient modern ordnance. The town was founded in 1794, by Gov. Simcoe. It was burned by the Americans in 1813, and suffered severely in the insurrection of 1837, on which occasion it was the headquarters of the rebellion.

Torpedo. During the war between Great

Britain and the United States in 1812-14, this name was applied to certain mysterious boats invented by Fulton and other Americans for the purpose of navigating beneath the surface of the water, and injuring the bottom of hostile vessels. In those days of hand-to-hand naval war, these designs (which, by the way, were failures) were looked upon as little less than diabolical. The progress of destructive weapons during half a century has removed this aversion, and nations do not scruple now to employ similar unseen agents for offense and defense. The modern torpedo is really a stationary bomb-shell, intended to explode under the bottom of an enemy's ship. The weapon was first used by the Russians in the Baltic in 1864; and in the American war of Secession, 1861-65, it was employed extensively, and often successfully. The damage effected by a torpedo exploding beneath a ship is very great; and although the failures are frequent by the explosion happening at a wrong moment, the danger from torpedoes is considerable in fact, and far more in apprehension, for sailors naturally dread navigating waters where destruction lurks at unknown points concealed from view. There are several varieties of torpedoes, but they may be divided into two classes,—those which are self-explosive on a ship touching them, and those which are dependent on an electric current supplied from the shore. The second are the safest for friendly vessels; but they are rather uncertain in action, and can only be employed at a moderate distance from the shore. The first are more certain in action, as they can only explode on a ship, being somewhere in contact, but they attack indiscriminately friend and foe.

Torque (*Fr.*). A metal collar formerly bestowed upon a Roman soldier who had killed his adversary in a single combat.

Torqued. In heraldry, twisted; bent;—said of a dolphin haurient, which forms a figure like the letter S.

Torre di Mare. A village of Naples, at the mouth of the Bassento, in the Gulf of Taranto. Its prosperity received a fearful blow when, after the battle of the Metaurus (207 B.C.), Hannibal was compelled to give up this part of Italy, and carried with him all the citizens of Megapontum, in order to defend them from the vengeance of the Romans. In the time of Cicero the city still existed, but in a state of rapid decay.

Torres-Vedras. A town of Estremadura, kingdom of Portugal, on the left bank of the Sizandro, about 80 miles north of Lisbon. It derives its reputation solely from having given name to those famous lines of defense within which Wellington took refuge in 1810, when he found it impossible to defend the frontier of Portugal against the French armies; and from which, in the year following, he issued on that career of slow and hard-won victory which ended in the expulsion of the French from the Peninsula. The first, or outermost of these lines, extending

from Alhandra, on the Tagus, to the mouth of the Sizandro, on the sea-coast, and following the windings of the hills, was 29 miles long; the second (and by far the most formidable) lay from 6 to 10 miles behind the first, stretching from Quintella, on the Tagus, to the mouth of the St. Lorenza, a distance of 24 miles; the third, situated to the southwest of Lisbon, at the very mouth of the Tagus, was very short, being intended to cover a forced embarkation, if that had become necessary. The entire ground thus fortified was equal to 500 square miles.

Torrington. A town of England, county of Devon, 10 miles south-southwest of Barnstaple. The name of Torrington emerges frequently during the great civil war; and the capture of the town by Fairfax in 1646, on which occasion the church, with 200 prisoners, and those who guarded them, were blown into the air by gunpowder, proved fatal to the king's cause in the west.

Torse, or Torce. In heraldry, a wreath.

Tortona. A town of Italy, province of Alessandria, on a hill nearly 900 feet above the sea. Tortona was once a strongly fortified city, but its last defenses were destroyed by order of Napoleon, after the battle of Marengo.

Tortosa. A town of Spain, in Catalonia, on the Ebro, 42 miles southwest from Tarragona. It was taken by the French under Suchet in 1811.

Tortu d'Hommes (*Fr.*). A particular formation which was formerly adopted by the besieged when they made a sortie.

Tory. The word tory first occurs in English history in 1679, during the struggle in Parliament occasioned by the introduction of the bill for the exclusion of the Duke of York from the line of succession, and was applied by the advocates of the bill to its opponents as a title of obloquy or contempt. The name has, however, ceased to designate any existing party; the political successors of the tories are now commonly known as conservatives. In the Revolutionary war of the United States, the loyalists were called *tories*.

Touch-box. A box containing lighted tinder, formerly carried by soldiers who used matchlocks, to kindle the match.

Touch-hole. The vent of a cannon or other species of fire-arms, by which fire is communicated to the powder of the charge.

Toula, or Tula. An important town of Great Russia, capital of the government of the same name, on the Upa, 110 miles south of Moscow. It is an ancient town, and has suffered severely from Tartar invasion, and during the wars of the commencement of the 17th century. The Russian army is largely supplied with muskets and small-arms from the works of this town.

Toulon. A great seaport and naval arsenal of France, department of Var. It stands at the head of a deeply-penetrating inlet of the Mediterranean. It is a fortress of immense strength, and is surrounded by

a double rampart, and by a wide and deep fosse. Toulon was destroyed by the Saracens in 889, and again by them about the close of the 12th century. It was only at the end of the 16th century that Toulon came to be important as a naval and military stronghold. In 1707, it was assailed without success by the Duke of Savoy by land, and the English and Dutch by sea. It was taken by the English and Spaniards in 1798; but the allies were obliged to evacuate the town in December of the same year, after being fiercely attacked by the republicans, whose guns were commanded by Napoleon,—then a simple officer of artillery,—who here evinced for the first time his genius and self-reliance.

Toulouse (anc. *Tolosa*). An important city of France, capital of the department of Haute-Garonne, on the right bank of the river Garonne, 160 miles southeast of Bordeaux. The ancient *Tolosa* and its temple were plundered by the consul Q. Servilius Cæpio in 106 B.C. It was ravaged by the Visigoths and Franks, who successively overran and possessed the country. A battle was fought here in 1814, between Wellington and Soult, in which the latter was defeated, and obliged to evacuate the town.

Tour, or Turn. That which is done by succession. *Tour of duty*, turn to go on duty.

Tourbillon. See PYROTECHNY.

Tournament, or Tournay. A military sport of the Middle Ages, in which combatants engaged one another with the object of exhibiting their courage, prowess, and skill in the use of arms, or for the honor of the ladies attending. According to Ducange, the difference between a tournament and a *joust* is, that the latter is a single combat, while in the former a troop of combatants encounter each other on either side. But this distinction has not been always observed.

Tournay (anc. *Tornacum*, or *Turris Nerviorum*, "Fort of the Nervii"). A fortified town of Belgium, province of Hainault, on both sides of the Scheldt, near the French frontier. It was in the 5th and beginning of the 6th centuries the seat of the Merovingian kings, subsequently belonged to France, but at the peace of Madrid was included in the Spanish Netherlands. Subsequently it was oftener than once taken by France, but again restored by treaty. During the month of May, 1794, it was the scene of several hotly contested fights between the French and Austro-English armies, the most important of which was that of May 19, in which Pichegru beat the Duke of York.

Tours. A city of France, capital of the department of Indre-et-Loire, 146 miles southwest from Paris. Near it Charles Martel gained a great victory over the Saracens, and saved Europe, October 10, 732. This conflict was also called the battle of Poitiers. The church was pillaged by the Huguenots and utterly destroyed, with

the exception of two towers, at the revolution.

Tower. A citadel; a fortress; hence, a defender.

Tower Bastion. In fortification, is one which is constructed of masonry, at the angles of the interior polygon of some works; and has usually vaults or casemates under its terre-plein, to contain artillery, stores, etc.

Tower of London. In feudal days, a powerful fortress; then, and long after, a state prison of gloomy memories; now a government store-house and armory, and still in some sense a stronghold; is an irregular quadrilateral collection of buildings on rising ground adjoining the Thames, and immediately to the east of the city of London. The kings frequently resided there, holding their courts, and not unfrequently sustaining sieges and blockades from their rebellious subjects. At present, the Tower of London is a great military store-house in charge of the war department, containing arms and accoutrements for the complete equipment of a large army. It is needless to say that, viewed as a fortress, the Tower would be useless against modern arms. The government is vested in a constable, who has great privileges, and is usually a military officer of long service and distinguished mark; the deputy-constable, also a general officer of repute, is the actual governor. He has a small staff under him, and the corps of Yeomen of the Guard, more commonly known as Beef-eaters.

Towered. Adorned or defended by towers.

Towers, Movable. The *purgi* of the Greeks, and the *turres mobiles* of the Romans, consisted of several stories, furnished with engines, ladders, casting-bridges, etc., and moving on wheels, for the purpose of being brought near the walls. They were usually of a round form, though sometimes square or polygonal. Before the invention of guns, they used to fortify places with towers, and to attack them with movable towers of wood, mounted on wheels, to set the besiegers on a level with the walls, and drive the besieged from under the same. These towers were sometimes 20 stories, and 80 fathoms high. They were covered with raw skins, and 100 men were employed to move them.

Tow-hooks. See IMPLEMENTS.

Town-Adjutant, Town-Major. In Great Britain, officers on the staff of a garrison. They are often veteran officers, too much worn for field service. The pay depends on the magnitude of the trust. The town-major ranks as a captain; the adjutant as a lieutenant. The duties of these officers consist in maintaining discipline, and looking after the finding of the batteries, etc.

Towton. A township of England, county of York, West Riding. Here a sanguinary battle was fought, March 29, 1461, between the houses of York (Edward IV.) and Lan-

caster (Henry VI.), to the latter of whom it was fatal, and on whose side more than 87,000 fell. Edward issued orders to give no quarter, and the most merciless slaughter ensued. Henry was made prisoner, and confined in the Tower; his queen, Margaret, fled to Flanders.

Traband. A trusty brave soldier in the Swiss infantry, whose particular duty was to guard the colors and the captain who led them. He was armed with a sword and a halbert, the blade of which was sharpened like a pertuisan. He generally wore the colonel's livery, and was excused from all the duties of a sentinel.

Tracing, or Outline. Is the succession of lines that show the figure of the works, and indicate the direction in which the defensive masses are laid out, in order to obtain a proper defense.

Tracing-pickets. These are short pickets, 18 inches long, and about 1 inch in diameter, which are useful in marking out the details of field-works. They are made rather more expeditiously than fascine-pickets, and should be tied up in bundles of 25 each. Every bundle weighs about 8 pounds when the wood is dry.

Track. In gunnery, by track is understood the distance between the furrows formed by the wheels of artillery carriages in the ground. It is important that the track should be the same for all carriages likely to travel the same road, in order that the wheels of one carriage may follow in the furrows formed by those of its predecessor, and thereby prevent a loss of tractile force. The track of artillery carriages is 5 feet, and the extreme length of the axle-tree is 6½ feet for field-, and 6½ feet for siege-carriages.

Trail. In tactics, to carry, as a fire-arm, with the butt near the ground, and the muzzle inclined forward, the piece being held by the right hand near the middle.

Trail. In gunnery, the end of a travelling-carriage, opposite to the wheels, and upon which the carriage slides when unlimbered. See **ORDNANCE, CARRIAGES FOR.**

Trail Hand-spike. See **HAND-SPIKE.**

Trail-handles. See **ORDNANCE, CARRIAGES FOR.**

Trail-plate. See **ORDNANCE, CARRIAGES FOR.**

Trail-bridge. See **PONTONS.**

Train. To teach and form by practice; to exercise; to discipline; as, to train the militia to the manual exercise; to train soldiers to the use of arms.

Train. A line of gunpowder, laid to lead fire to a charge, or to a quantity intended for execution.

Train, Artillery-. See **ARTILLERY-TRAIN.**

Train, Ponton-. See **PONTONS, BRIDGE EQUIPAGE.**

Train-Bands (or more properly, *Trained Bands*). A force of militia, and not differing essentially from that force substituted by James I. for the old English Fyrd, or national militia. The train-bands of London were

chiefly composed of apprentices; and their unruly doings formed the subject for many facetious plays and tales. In the civil wars, the train-bands sided with the Parliament; and Charles II. restored the militia on its old local footing.

Trainer. In the United States, a militiaman when called out for exercise or discipline.

Training-day. In the United States, a day on which a military company assembles for drill, especially in public.

Traitor. One who violates his allegiance and betrays his country; one guilty of treason; one who, in breach of trust, delivers his country to its enemy, or any fort or place intrusted to its defense, or who surrenders an army or body of troops to the enemy, unless when vanquished; or one who takes arms and levies war against his country; or one who aids an enemy in conquering his country.

Traitorous. Guilty of treason; treacherous; perfidious; faithless; as, a traitorous officer or subject. Also, consisting of treason; partaking of treason; implying breach of allegiance; as, a traitorous scheme or conspiracy.

Trajan's Wall. A line of fortifications stretching across the Dobrudscha from CzerNAVODA, where the Danube bends northwards, to a point of the Black Sea coast near Kustendji. It consists of a double, and in some places a triple, line of ramparts of earth, from 8½ to 11 feet in height on the average (though occasionally it attains an altitude of 19½ feet), bounded along its north side by a valley, which being generally marshy, and abounding in small lakes and pools, serves admirably the purpose of a fosse. During the war of 1854, Trajan's wall became an important line of defense on the invasion of the Dobrudscha by the Russians, and the invaders were twice defeated in their attempts to pass it,—at Kostelli, (April 10), and CzerNAVODA (April 20-22).

Trajectory. The increasing curve described by a projectile in its flight through the air. See **PROJECTILE, PROJECTILES, THEORY OF.**

Tralee. A town of Ireland, chief town of the county of Kerry, on the river Lea, 59 miles northwest from Cork. Tralee was destroyed in the rebellion of 1641.

Trani. A maritime city of Southern Italy, in the province of Terra di Bari, 25 miles northwest of the town of Bari. Trani submitted to the Normans in 1053. It was then the chief town of a vast country, and was an important harbor in the time of the crusades.

Transfers. Soldiers taken out of one troop, or company, and placed in another are so called. Non-commissioned officers or soldiers will not be transferred from one regiment to another without the authority of the commanding general. The colonel of a regiment may, upon the application of the captains, transfer a non-commissioned officer or

soldier from one company to another of his regiment,—with consent of the department commander in case of a change of post. The transfer of officers from one regiment or corps to another will be made only by the war department, on the mutual application of the parties desiring the exchange.

Transfixed. An ancient term used to express the state of being desperately wounded by some pointed instrument, as being run through by a spear, javelin, or bayonet; pierced through so that the weapon is fixed in another body.

Transfluent. In heraldry, passing or flowing through a bridge,—said of water.

Transfuge. A turncoat, a deserter, a runaway; one who abandons his party in time of war, and goes over to the enemy.

Transit-compass. A species of theodolite, consisting of a telescope revolving in a vertical plane on a horizontal axis, as in a transit-instrument, combined with a compass, a graduated horizontal limb, etc., used for running lines, observing bearings, horizontal angles, and the like; called also *surveyor's transit*.

Transoms. In gunnery, are pieces of wood or iron which join the cheeks of gun-carriages and hold them together; they are known as the front and rear transoms.

Transportation. The act of transporting, carrying, or conveying from one place to another; as, the transportation of troops, munitions of war, etc.

Transportation of Artillery. In transporting artillery by sea, divide the total quantity to be transported among the vessels, and place in each vessel everything necessary for the service required at the moment of disembarkation, so that there will be no inconvenience should other vessels be delayed. If a siege is to be undertaken, place in each vessel with each piece of artillery its implements, ammunition, and the carriages necessary to transport the whole or a part; the platforms, tools, instruments, and materials for constructing batteries; skids, rollers, scantling, and plank. If a particular caliber of gun is necessary for any operation, do not place all of one kind in one vessel, to avoid being entirely deprived of them by accident. Dismount the carriages, wagons, and limbers, by taking off the wheels and boxes, and, if absolutely necessary, the axle-trees. Place in the boxes the lynch-pins, washers, etc., with the tools required for putting the carriages together again. Number each carriage, and mark each detached article with the number of the carriage to which it belongs. The contents of each box, barrel, or bundle, should be marked distinctly upon it. The boxes should be made small for the convenience of handling, and have rope handles to lift them by. Place the heaviest articles below, beginning with the shot and shells (empty), then the guns, platforms, carriages, wagons, limbers, ammunition, boxes, etc.; boxes of small-arms and ammunition in the dryest

and least exposed part of the vessel. Articles required to be disembarked first should be put in last, or so placed that they can be readily got at. If the disembarkation is to be performed in front of the enemy, some of the field-pieces should be so placed that they can be disembarked immediately, with their carriages, implements, and ammunition; also the tools and materials for throwing up temporary intrenchments on landing. Some vessels should be laden solely with such powder and ammunition as may not be required for the immediate service of the pieces. On a smooth sandy beach, heavy pieces, etc., may be landed by rolling them overboard as soon as the boats ground, and hauling them up with sling-carts.

Transylvania. Is the most easterly crownland of Austria, and is bounded on the north by Hungary and Galicia, east by Bukovina and Moldavia, south by Wallachia, and west by the Military Frontier, the Banat, and Hungary. Transylvania is little noticed in history till the Christian era, when part of it was occupied by the warlike Dacians, soon after whom the Sarmatian tribes of the Jazyges and Carpi settled in it. The conquest of the Dacians by Trajan, however, did not include that of the other two peoples, who proved very troublesome to the Roman settlers along the Danube, till they were conquered by Diocletian, and the Carpi carried away to Pannonia and other districts. In the middle of the 4th century, the Goths overran the country, defeating the Sarmatians in a great battle on the Maros, in which the monarch and the chief of his nobility perished; and they in their turn were forced in 375 to retire before the Huns and their confederates. The Gepidae next took possession of Transylvania, till their almost complete extirpation, in 566, by the Lombards and Avars. It was conquered by the Hungarians about 1000, and was governed by voivodes till 1526, when the death of the Hungarian monarch at Mohacs prepared the way for the union of the two countries under the voivode John Zapolya; but the war which thence arose with the Austrians caused their complete severance, and Zapolya's sway was, in 1585, confined to Transylvania, of which he became sovereign lord, under the protection of the Turks. The Saxons were summoned by the Hungarian monarchs to act as a counterpoise to the increasing power of the nobles; the firm protection and generous treatment accorded to the Saxons by the Hungarian monarchs were rewarded by steadfast loyalty and succor in men and money whenever required. During the rest of the 16th century the country was distracted by the bitter strife between the Catholic party, who were supported by Austria, and the Protestant party, who were allied with the Turks; the latter party, headed successively by princes of the houses of Zapolya and Bathory, generally maintaining the superiority. The next chief of the Protestant party was the

celebrated Botskay, whose successes against Austria extorted from the emperor an acknowledgment of the independence of Transylvania in 1606. To him succeeded Bethlem Gabor, the determined foe of Catholicism and Austria, who did important service during the Thirty Years' War. Between his son and successor, Stephen, and Ragotski arose a contest for the crown, in which the latter prevailed; but on Ragotski's death, the civil war was resumed, till the complete rout of the Austrians by the Turks, under Kiupruli, placed the sceptre in the hands of Michael Abaffi, who reigned till his death, in 1690, as a vassal of the Porte. The Austrians now again possessed themselves of Transylvania, despite the heroic resistance of Ragotski; and though Tekeli succeeded for a brief period in rolling back the invaders, the peace of Carlowitz, in 1699, again put them in possession; and in 1713 Transylvania was completely incorporated with Hungary. During the insurrection in 1848 the Hungarians and Szeklers (one of the races inhabiting Transylvania) joined the insurgents and forced Transylvania to reunite with Hungary, despite the opposition of the Saxons; and the Wallachs, still little better than a horde of savages, were let loose over the land, to burn, plunder, and murder indiscriminately; the prostration of the country being completed in the following year during the bloody conflict which took place here between Bem and the Russian troops. In the same year Transylvania was again separated from its turbulent neighbor and made a crownland, the portions of it which had, in 1835, been annexed to Hungary being restored, as well as the Transylvanian Military Frontier, in 1851.

Trapani. See DREPANUM.

Trapezus (now *Tarabosan*, *Trabesun*, or *Trebizond*). A colony of Sinope, at almost the extreme east of the northern shore of Asia Minor. It was strongly fortified. It was taken by the Goths in the reign of Valerian.

Trappings. See HOUSING.

Trasimenus Lacus. The ancient name of an Italian lake (*Lago Trasimeno*, or *Lago di Perugia*), lying between the towns of Cortona and Perugia. Trasimenus Lacus is memorable chiefly for the great victory obtained by Hannibal in 217 B.C., during the second Punic war, over the Romans, under their consul, C. Flaminius. Hannibal leaving Tæsulæ passed close by the camp of Flaminius at Arretium, laying waste the country as he proceeded in the direction of Rome. This, as the Carthaginian general intended, induced the consul to break up his encampment and follow in pursuit, Hannibal in the mean time taking up a strong position on the hills on the north side of the lake, along which he was passing. The consul, coming up early next morning, when the whole place was enveloped in mist, saw only the troops in front on the hill of

Tuoro, with whom he was preparing to engage; when he found himself surrounded and attacked on all sides. The Carthaginians thus had the Romans completely in their power, and took such advantage of the opportunity, that 16,000 Roman troops are said to have been either massacred or drowned in the lake; Flaminius himself being among the first who fell; 6000 troops who had forced their way through the enemy, surrendered next day to Maharbal. It is said both by Livy and Pliny that the fury on both sides was so great as to render the combatants unconscious of the shock of an earthquake which occurred during the battle.

Trautenau. A town of Bohemia, 25 miles north-northeast from Königsgratz. On June 27, 1866, the 1st Corps of the army of the crown-prince of Prussia seized Trautenau, but was defeated and repulsed by the Austrians under Gablenz; on the 28th, the Prussians defeated the Austrians with great loss.

Traveling Allowance. Is an allowance made to officers when traveling under proper orders. An officer who travels not less than 10 miles from his station, without troops, escort of military stores, and under special orders in the case from a superior, or summons to attend a military court, shall receive 8 cents per mile. Whenever a soldier shall be discharged from the service, except by way of punishment for any offense, or on his own application, or for disability prior to three months' service, he shall be allowed his pay and rations, or an equivalent in money, for such term of time as shall be sufficient for him to travel from the place of his discharge to the place of his residence, computing at the rate of twenty miles to a day.

Traveling Forge. See ORDNANCE, CARRIAGES FOR.

Traveling Kitchen. Marshal Saxe, it is believed, first suggested the idea of cooking while marching, so as to economize the strength of soldiers, have their food well cooked in all weather, and avoid the numerous diseases caused by bad cooking and want of rest. Col. Cavalli, of the Sardinian artillery, has with the same laudable motive embraced a kitchen-cart in the improvements suggested by him to replace the wagons now in use, and an attempt is here made to elaborate the same idea of a *traveling-kitchen*, designed for baking, making soup, and other cooking, while on a march. The cart is 12½ feet long, mounted on two 6-foot wheels covered with a very light canvas roof with leather-cloth curtains. A large range or stove forms the body of the vehicle; its grate is below the floor, its doors opening on a level with it. A *Papin's digester* is inclosed above the grate, in a flue whence the heat may pass around the double oven in the rear, or straight up the chimney, as regulated by dampers. At the side of the digester, over the grate, is a range, suited to various cooking vessels. The top

of the oven forms a table nearly 5 feet square, at which three cooks may work, standing upon the rear platform. A foot-board passes from this platform to the front platform, where the driver and cook may stand. Stores may be placed in the lockers at the side of the range, and under the rear foot-board. The chimney may be turned down above the roof, to pass under trees, etc., and may be of any height to secure a good draught. By bending the axle like that of an omnibus, the vehicle may be hung without danger of top-heaviness. Cooking vessels more bulky than heavy may be suspended from the roof, over the range, when not in use. The digester may have a capacity of 100 gallons, and an oven of 60 to 75 cubic feet would be quite adequate to the cooking for 250 men; or the dimensions of the cart may be smaller, and each company of 100 men might have its own traveling-kitchen, which would also furnish oven and cooking utensils for a camp.

Traveling Trunnion-beds. See **ORDNANCE, CARRIAGES FOR, SIEGE-CARRIAGES.**

Traverse. The turning a gun so as to make it point in any desired direction.

Traverse Circles. In gunnery, are circular plates of iron, fastened to a bed of solid masonry, on which the traverse wheels, which support the chassis, roll.

Traverses. In fortifications, are mounds of earth, above the height of a man, and 18 feet thick, placed at frequent intervals on a rampart, to stop shot which may enfilade the face of such rampart. A fire of this nature, in the absence of traverses, would dismount the guns, and prove altogether ruinous. The traverses also give means of disputing the progress of an assailant who has gained a footing on the wall, for each traverse becomes a defensible parapet, only to be taken by storm.

Traversing-plates. In gun-carriages, are two thin iron plates, nailed on the hind part of a truck-carriage of guns, where the hand-spike is used to traverse the gun.

Traversing-platform. An elevation on which the guns are mounted for the defense of the coast, and generally for all sea-batteries, as affording greater facility of traversing the gun, so as to follow, without loss of time, any quick-moving object on the water.

Travois. A rude but efficient mode of transportation for conveying the wounded over a level or rolling country, when ambulances are not at hand. It consists of two poles about 16 feet long and 4 inches in diameter; two stretcher bars or poles, 2½ inches in diameter and 8 feet long; and a canvas or rawhide bottom, 5½ feet long and 2½ feet broad; and if of canvas, with eyelet-holes at the sides and ends, which are to be lashed to the poles with rope. The rear ends of the travois-poles rest on the ground, while the front ends are attached to each side of a mule, which draws the travois. The litter is better adapted to a rough country. (See **LITTER.**) The ordinary teepee-poles with

which the Indians pitch their tents when in villages are also used in constructing the travois. The Dakota and Montana Sioux, who use mountain-pine or ash-poles, select straight, well-proportioned saplings of those woods, trim them down to the proper size and taper, and lay them aside to season. The dressed poles are about 30 feet long, 2 to 2½ inches at the butt, and 1½ inches at the other extremity. The couch is oval, and the rim is made exclusively of ash, bent into the desired shape when the wood is green. A net-work of rawhide is afterwards lashed to the rim and completes the bed. The bed is 3½ to 4 feet in its transverse, and 2½ to 3 feet in its conjugate diameter. Two or three of the teepee-poles are lashed together, butts to butts, with rawhide, and then lashed to the pack-saddle on the mule, the small ends of the poles trailing the ground. The bed with the longer diameter is then laid transversely on the poles and lashed about 1 foot in rear of the animal. A blanket, piece of canvas, or buffalo-robe lashed to the lower half of the oval rim of the bed completes the outfit. This latter travois is claimed by some officers of the army to be well adapted for transporting wounded even over a rough country.

Tread. In fortification, the tread of a banquette is the upper and flat surface on which the soldier stands whilst firing over the parapet.

Treason. A general appellation to denote not only offenses against the king and government, but also that accumulation of guilt which arises whenever a superior reposes confidence in a subject or inferior, between whom and himself there subsists a natural, a civil, or even a spiritual relation; and the inferior so abuses that confidence, so forgets the obligations of duty, subjection, and allegiance, as to destroy the life of any such superior or lord. It is, according to English law, a general name, in short, for treachery against the sovereign or liege lord. High treason (the *crimen læsæ majestatis* of the Romans) is an offense committed against the security of the king or kingdom, whether by imagination, word, or deed. In the United States, treason is confined to the actual levying of war against the United States; or an adhering to their enemies, giving them aid and comfort.

Treaty. An agreement, league, or contract, between two or more nations or sovereigns, formally signed by commissioners properly authorized, and solemnly ratified by the several sovereigns or the supreme power of each state; an agreement between two or more independent states.

A *treaty of guaranty* is an engagement by which one state promises to aid another when it is disturbed, or threatened to be disturbed, in the peaceable enjoyments of its rights by a third power. Treaties of alliance may be offensive or defensive; in the former the ally engages generally to co-operate in hostilities against a specified

power, or against any power with which the other may be at war; in the latter, the engagements of the ally extend only to a war of aggression commenced against the other contracting party. The execution of a treaty is occasionally secured by hostages; as at the peace of Aix-la-Chapelle, in 1748, when several peers were sent to Paris as hostages for the restoration of Cape Breton by Great Britain to France. For celebrated treaties, see appropriate headings in this work.

Trebbia. A small but famous stream of Northern Italy, which joins the Po 2 miles west of Piacenza. On its banks Hannibal decisively defeated the Roman consul Sempronius, 218 B.C.; the French were also defeated here by Suwarrow in 1799.

Trebuchet, or Trebucket. A machine used in the Middle Ages for throwing stones, etc., acting by means of a great weight fastened to the short arm of a lever, which, being let fall, raised the end of the long arm with great velocity, and hurled stones with much force.

Trefle (*Trefoil*). A term used in mining, from the similarity of the figure to trefoil. The simple trefle has only two lodgments; the double trefle, four; and the triple one, six.

Trefoil. In heraldry, is a frequent charge, representing the clover-leaf, and is always depicted as *slipped*,—i.e., furnished with a stalk.

Trench-cavalier. In fortification, an elevation constructed, by a besieger, of gabions, fascines, earth, and the like, about half-way up the glacis, in order to discover and enfilade the covert way.

Trenches. The communications, boyaux, or zigzags, as well as the parallels or places of arms opened by besiegers against a fortification are trenches. They are from 6 to 10 feet wide and about 8 feet deep. (See **PARALLELS**, and **SIEGE**.) *To mount the trenches*, is to mount guard in the trenches, which is generally done in the night. *To relieve the trenches*, is to relieve the guard of the trenches. *To scour the trenches*, is to make a vigorous sally upon the guard of the trenches, force them to give way, and quit their ground, drive away the workmen, break down the parapet, fill up the trenches, and spike their cannon.

Trenches, Opening of. See **OPENING OF TRENCHES**.

Trench-shelter. A trench hastily thrown up to give cover to troops on a field of battle. It is always 1 foot 3 inches deep, and the parapet is from 1½ to 1¾ feet high. A trench 2 feet broad can be made in from 10 to 20 minutes; one 4 feet wide in from 20 to 40 minutes; and one 7 feet broad in from 30 to 60 minutes. There are also small trenches in rear for the supernumeraries.

Trenton. The capital city of the State of New Jersey, on the left bank of the Delaware River, at the confluence of Assunpink Creek. In the war of the Revolution, Tren-

ton was the scene of a night attack by Washington upon the British troops—chiefly Hessians—whom he surprised by crossing the Delaware, when the floating ice was supposed to have rendered it impassable, on the night of December 25 and morning of the 26th, 1776.

Trepied. In ancient times, a ballista was so called when supported on three legs.

Tressure. In heraldry, a subordary, generally said to be half the breadth of the orle, and usually borne double, and flowered and counterflowered with fleurs-de-lis. It forms part of the royal insignia of Scotland. The tressure is held in great honor in Scottish heraldry.

Trestles. A trestle is composed of a cap about 15 feet by 9 inches by 9 inches, of four legs, of two upper and two lower traverses, and of four braces. The cap is notched 18 inches from the end, to receive the legs; the notch is 5 inches wide and 1 deep. The legs should be from 5 to 6 inches square; a shoulder is made to fit the notch in the cap; the spread is quarter the height. The inclination in the other direction about one-sixteenth. The leg is spiked, pinned, or bolted to the cap. The lower traverse is 5 inches by 1½ inches, and is dovetailed into the legs at about one-quarter their height from the ground. The upper traverse, which is nailed on the outside of the legs and against the cap, is 6 inches wide and 1½ inches thick. The braces are 4 inches wide by 1½ inches thick, and are spiked to the cap and legs. When trestles are to be placed on a soft bottom, a flat sill may be spiked under the legs of each side.

Trestle Bridge.—When the water is less than 4 feet deep, the trestles may be carried to their places by men wading in the stream; an abutment is formed as for an ordinary bridge; the trestles are placed with their caps parallel to the abutment sill and about 18 feet apart. When the water is too deep or too cold to allow this method to be pursued, the bridge may be constructed as follows:

The abutment sill being placed, the first trestle can usually be placed by hand; the balks are laid and covered with chesses to within 1 foot of the trestle, a roller is laid on the bridge; on this are laid two beams, from 30 to 40 feet long and 6 or 7 inches square. The trestle is placed upright, with its cap resting on these beams, to which it is firmly lashed. The pontoniers bear down on the other ends of the beams, at the same time pushing until the trestle is rolled out to the proper distance; then they suddenly release the beams, dropping the trestle into its place. The flooring balks are slid out on the two beams, adjusted, and covered with chesses.

When a boat or raft can be procured, the trestles are placed with much less labor. The boat is brought alongside the last trestle placed; two balks are laid from the bridge, resting on a saddle, or the outer gunwale of

the boat; the side of the trestle-cap is laid on the barks, the legs extending over the outer gunwale of the boat. The boat is pushed off by means of the barks until it arrives at the proper position for placing the trestle, which is then righted. If it has not good bearing on the bottom, it is hauled into the boat and the legs are cut to the proper length.

The bridge may be entirely built of round timber. The caps should be from 10 to 12 inches in diameter, the legs at least 6 inches, the barks 7 or 8 inches, and faced on the lower side where they rest on the trestles, so as to bring their upper surfaces on the same plane. The covering may be of strong hurdles.

Treves, or **Trier** (anc. *Augusta Trevirorum*). A town of Rhenish Prussia, on the right bank of the Moselle, 65 miles southwest from Coblenz. Treves derives its name from the *Treviri*, or *Treveri* (which see). Their capital, *Augusta Trevirorum*, became a Roman colony in the time of Augustus, and ultimately became the headquarters of the Roman commanders on the Rhine, and a frequent residence of the emperors. Under the Franks, into whose hands it fell in 463, it continued to flourish. In 848 it passed to Lorraine; in 870 to Germany; in 895 back to Lorraine, and finally was united to Germany by the emperor Henry I. Since 1814, Treves has belonged to Prussia.

Treviri, or **Treveri**. A powerful people in Gallia Belgica, who were faithful allies of the Romans, and whose cavalry was the best in all Gaul.

Treviso. A fortified town of Italy, in Venice, 17 miles northwest from Venice. Treviso, the ancient *Trevisium*, was a free town under the Romans; and after the fall of the empire was conquered in turn by the Huns, Ostrogoths, and Lombards. Thereafter it was for a time independent, and at length, in 1844, voluntarily submitted itself to the republic of Venice.

Tria Juncta in Uno (three joined in one). The motto of the knights of the military order of the Bath, signifying "faith, hope, and charity."

Trial. The formal examination of the matter in issue in a cause before a competent tribunal; the mode of determining a question of fact in a court of law; the examination, in legal form, of the facts in issue in a cause pending before a competent tribunal, for the purpose of determining such issue. Military trials shall be carried on only between the hours of eight in the morning and three in the afternoon, except in cases which, in the opinion of the officer ordering the court, require immediate example (Art. 94). No officer, non-commissioned officer, or soldier shall be tried a second time for the same offense (Art. 102); and no person shall be liable to be tried and punished by a general court-martial for any offense which shall appear to have been com-

mitted more than two years before the issuing of the order for such trial, unless the person, by reason of having absented himself, or some other manifest impediment, shall not have been amenable to justice within that period (Art. 103). All trials before courts-martial, like those in civil courts, are conducted publicly; and in order that this publicity may in no case be attended with tumult or indecorum of any kind, the court is authorized, by the Rules and Articles of War, to punish, at its discretion, all riotous and disorderly proceedings or menacing words, signs, or gestures, used in its presence (Art. 86). The day and place of meeting of a general court-martial having been published in orders, the officers appointed as members, and parties and witnesses, must attend accordingly. The judge-advocate, at the opening, calls over the names of the members, who arrange themselves on the right or left of the president, according to rank. The members of the court having taken their seats and disposed of any preliminary matter, the prisoner, prosecutor, and witnesses are called into court. The prisoner is attended by a guard, or by an officer, as his rank or the nature of the charge may dictate; but during the trial should be unfettered and free from any bonds or shackles, unless there be danger of escape or rescue. Accommodation is usually afforded at detached tables for the prosecutor and prisoner; also for any friend or legal adviser of the prisoner or prosecutor, whose assistance has been desired during the trial; but the prisoner only can address the court, it being an admitted maxim, that counsel are not to interfere in the proceedings, or to offer the slightest remark, much less to plead or argue. The judge-advocate, by direction of the president, first reads, in an audible voice, the order for holding the court. He then calls over the names of the members, commencing with the president, who is always the highest in rank. He then demands of the prisoner whether he has any exception or cause of challenge against any of the members present, and if he have, he is required to state his cause of challenge, confining his challenge to one member at a time (Art. 88). After hearing the prisoner's objections, the president must order the court to be cleared, when the members will deliberate on and determine the relevancy or validity of the objection; the member challenged retiring during the discussion. When the prisoner and prosecutor decline to challenge any of the members, or where the causes of challenge have been disallowed, the judge-advocate proceeds to administer to the members of the court the oath prescribed by the 84th Article of War. The oath is taken by each member holding up his right hand and repeating the words after the judge-advocate. After the oath has been administered to all the members, the president administers to the judge-advocate the particular oath of secrecy to be observed by

him, as prescribed by the 85th Article of War. No sentence of a general court-martial is complete or final until it has been duly approved. Until that period it is, strictly speaking, no more than an opinion, which is subject to alteration or revisal. In this interval, the communication of that opinion could answer no ends of justice, but might, in many cases, tend to frustrate them. The obligation to perpetual secrecy, with regard to the votes or opinions of the particular members of the court, is likewise founded on the wisest policy. The officers who compose a military tribunal are, in a great degree, dependent for their preferment on the President. They are even, in some measure, under the influence of their commander-in-chief,—considerations which might impair justice. This danger is, therefore, best obviated by the confidence and security which every member possesses, that his particular opinion is never to be divulged. Another reason is, that the individual members of the court may not be exposed to the resentment of parties and their connections, which can hardly fail to be excited by these sentences which courts-martial are obliged to award. It may be necessary for officers, in the course of their duty, daily, to associate and frequently to be sent on the same command or service, with a person against whom they have given an unfavorable vote or opinion on a court-martial. The publicity of these votes or opinions would create the most dangerous animosities, equally fatal to the peace and security of individuals, and prejudicial to the public service. The court being regularly constituted, and every preliminary form gone through, the judge-advocate, as prosecutor for the United States, desires the prisoner to listen to the charge or charges brought against him, which he reads with an audible voice, and then the prisoner is asked whether he is guilty or not guilty of the matter of accusation. The charge being sufficient, or not objected to, the prisoner must plead either: (1st) Guilty; or (2d) Specially to the jurisdiction, or in bar; or (3d) The general plea of *not guilty*, which is the usual course where the prisoner makes a defense. If from obstinacy and design the prisoner stands mute, or answer foreign to the purpose, the court may proceed to trial and judgment, as if the prisoner had regularly pleaded *not guilty* (Art. 89); but if the prisoner plead *guilty*, the court will proceed to determine what punishment shall be awarded, and to pronounce sentence thereon. Preparatory to this, in all cases where the punishment of the offense charged is discretionary, and especially where the discretion includes a wide range and great variety of punishment, and the specifications do not show all the circumstances attending the offense, the court should receive and report, in its proceedings, any evidence the judge-advocate may offer, for the purpose of illustrating the actual character of the offense, notwithstanding the

party accused may have pleaded guilty; such evidence being necessary to an enlightened exercise of the discretion of the court, in measuring the punishment, as well as for the approving authority. If there be any exception to this rule, it is where the specification is so full and precise as to disclose all the circumstances of mitigation or aggravation which accompany the offense. When that is the case, or when the punishment is fixed, and no discretion is allowed, explanatory testimony cannot be needed. Special pleas are either to the jurisdiction of the court or in bar of the charge. If an officer or soldier be arraigned by a court not legally constituted, either as to the authority by which it is assembled, or as to the number and rank of its members, or other similar causes, a prisoner may except to the jurisdiction of the court-martial. Special pleas in bar go to the merits of the case, and set forth a reason why, even admitting the charge to be true, it should be dismissed, and the prisoner discharged. A former acquittal or conviction of the same offense would obviously be a valid bar, except in case of appeal from a regimental to a general court-martial. Though the facts in issue should be charged to have happened more than two years prior to the date of the order for the assembling of the court-martial, yet it is not the province of the court, unless objection be made, to inquire into the cause of the impediment in the outset. It would be to presume the illegality of the court, whereas the court should assume that manifest impediment to earlier trial did exist, and leave the facts to be developed by witnesses in the ordinary course. A pardon may be pleaded in bar. If full, it at once destroys the end and purpose of the charge, by remitting that punishment which the prosecution seeks to inflict; if conditional, the performance of the condition must be known; thus a soldier arraigned for desertion, must plead a general pardon, and prove that he surrendered himself within the stipulated period. No officer or soldier, being acquitted or convicted of an offense, is liable to be tried a second time for the same. But this provision applies solely to trials for the same incidental act and crime, and to such persons as have, in the first instance, been legally tried. If any irregularity take place on the trial rendering it illegal and void, the prisoner must be discharged, and be regarded as standing in the same situation as before the commencement of these illegal proceedings. The same charge may, therefore, be again preferred against the prisoner who cannot plead the previous illegal trial in bar. A prisoner cannot plead in bar that he has not been furnished with a copy of the charges, or that the copy furnished him differed from that on which he had been arraigned. It is customary and proper to furnish him with a correct copy, but the omission shall not make void, though it may postpone the trial. If the special plea in bar be such

that, if true, the charge should be dismissed and the prisoner discharged, the judge-advocate should be called on to answer it. If he does not admit it to be true, the prisoner must produce evidence to the points alleged therein; and if, on deliberation, the plea be found true, the facts being recorded, the court will adjourn and the president submit the proceedings to the officer by whose order the court was convened, with a view to the immediate discharge of the prisoner. The ordinary plea is *not guilty*, in which case the trial proceeds. The judge-advocate cautions all witnesses on the trial to withdraw, and to return to court only on being called. He then proceeds to the examination of witnesses, and to the reading and proof of any written evidence he may have to bring forward. After a prisoner has been arraigned on specific charges, it is irregular for a court-martial to admit any additional charge against him, even though he may not have entered on his defense. The trial on the charges first preferred must be regularly concluded, when, if necessary, the prisoner may be tried on any further accusation brought against him. On the trial of cases not capital, before courts-martial, the deposition of witnesses not in the line or staff of the army may be taken before some justice of the peace, and read in evidence, provided the prosecutor and person accused are present at the same, or are duly notified thereof. The examination of witnesses is invariably in the presence of the court; because the countenance, looks, and gestures of a witness add to, or take away from, the weight of his testimony. It is usually by interrogation, sometimes by narration; in either case, the judge-advocate records the evidence, as nearly as possible, in the express words of the witness. All evidence, whatever, should be recorded on the proceedings, in the order in which it is received by the court. A question to a witness is registered before enunciation; when once entered, it cannot be expunged, except by the consent of the parties before the court; if not permitted to be put to the witness, it still appears on the proceedings accompanied by the decision of the court. The examination-in-chief of each particular witness being ended, the cross-examination usually follows, though it is optional with the prisoner to defer it to the final close of the examination-in-chief. The re-examination by the prosecutor, on such new points as the prisoner may have made, succeeds the cross-examination, and finally, the court puts such questions as in its judgment may tend to elicit the truth. It is customary, when deemed necessary by the court, or desired by a witness, to read over to him, immediately before he leaves the court, the record of his evidence, which he is desired to correct if erroneous, and, with this view, any remark or explanation is entered upon the proceedings. No erasure or obliteration is, however, admitted, as it is

essentially necessary that the authority which has to review the sentence should have the most ample means of judging, not only of any discrepancy in the statements of a witness, but of any incident which may be made the subject of remark, by either party in addressing the court. Although a list of witnesses, summoned by the judge-advocate, is furnished to the court on assembling, it is not held imperative on the prosecutor to examine such witnesses; if he should not do so, however, the prisoner has a right to call any of them. Should the prisoner, having closed his cross-examination, think proper subsequently to recall a prosecutor's witness in his defense, the examination is held to be in chief, and the witness is subject to cross-examination by the prosecutor. Although either party may have concluded his case, or the regular examination of a witness, yet should a material question have been omitted, it is usually submitted by the party to the president, for the consideration of the court, which generally permits it to be put. The prisoner being placed on his defense, may proceed at once to the examination of witnesses: firstly, to meet the charge; and, secondly, to speak as to character, reserving his address to the court until the conclusion of such examination. The prisoner having finished the examination-in-chief of each witness, the prosecution cross-examines; the prisoner re-examines to the extent allowed to the prosecutor, that is, on such new points as the cross-examination may have touched on, and the court puts any questions deemed necessary. The prisoner having finally closed his examination of witnesses, and selecting this period to address the court, offers such statement or argument as he may deem conducive to weaken the force of the prosecution, by placing his conduct in the most favorable light, accounting for or palliating facts, confuting or removing any imputation as to motives; answering the arguments of the prosecutor, contrasting, comparing, and commenting on any contradictory evidence; summing up the evidence on both sides where the result promises to favor the defense, and finally, presenting his deductions therefrom. The utmost liberty consistent with the interest of parties not before the court and with the respect due to the court itself should, at all times, be allowed a prisoner. As he has an undoubted right to impeach, by evidence, the character of the witnesses brought against him, so he is justified in contrasting and remarking on their testimony, and on the motives by which they, or the prosecutor, may have been influenced. All coarse and insulting language is, however, to be avoided, nor ought invective to be indulged in, as the most pointed evidence may be couched in the most decorous language. The court will prevent the prisoner from adverting to parties not before the court, or only alluded to in evidence, further than may be actually necessary to his own exculpation. It may sometimes happen that the party ac-

cused may find it absolutely necessary, in defense of himself, to throw blame and even criminality on others, who are no parties to the trial; nor can a prisoner be refused that liberty, which is essential to his own justification. It is sufficient for the party aggrieved that the law can furnish ample redress against all calumnious or unjust accusations. The court is bound to hear whatever address, in his defense, the accused may think fit to offer, not being in itself contemptuous or disrespectful. It is competent to a court, if it think proper, to caution the prisoner as he proceeds, that, in its opinion, such a line of defense as he may be pursuing would probably not weigh with the court, nor operate in his favor; but, to decide against hearing him state arguments, which, notwithstanding such caution, he might persist in putting forward, as grounds of justification, or extenuation (such arguments not being illegal in themselves), is going beyond what any court would be warranted in doing. It occasionally happens that, on presenting to the court a written address, the prisoner is unequal to the task of reading it, from indisposition or nervous excitement; on such occasions, the judge-advocate is sometimes requested by the president to read it; but, as the impression which might be anticipated to be made by it may, in the judgment of the prisoner, be effected more or less by the manner of its delivery, courts-martial generally feel disposed to concede to the accused the indulgence of permitting it to be read by any friend named by him, particularly if that friend be a military man, or if the judge-advocate be the actual prosecutor. Courts-martial are particularly guarded in adhering to the custom of resisting every attempt on the part of counsel to address them. A lawyer is not recognized by a court-martial, though his presence is tolerated, as a friend of the prisoner, to assist him by advice in preparing questions for witnesses, in taking notes and shaping his defense. The prisoner having closed his defense, the prosecutor is entitled to reply, when witnesses have been examined on the defense, or where new facts are opened in the address. Thus, though no evidence may be brought forward by the prisoner, yet should he advert to any case, and, by drawing a parallel, attempt to draw his justification from it, the prosecutor will be permitted to observe on the case so cited. When the court allows the prosecutor to reply, it generally grants him a reasonable time to prepare it; and, upon his reading it, the trial ceases. Should the prisoner have examined witnesses to points not touched on in the prosecution, or should he have entered on an examination impeaching the credibility of the prosecutor's evidence, the prosecutor is allowed to examine witnesses to the new matter; the court being careful to confine him within the limits of this rule, which extends to the re-establishing the character

of his witnesses, to impeaching those of the defense, and to rebutting the new matter brought forward by the prisoner, supported by evidence. He cannot be allowed to examine on any points which, in their nature, he might have foreseen previously to the defense of the prisoner. The prosecutor will not be permitted to bring forward evidence to rebut or counteract the effect of matter elicited by his own cross-examination; but is strictly confined to new matter introduced by the prisoner, and supported by his examination-in-chief. A defense resting on motives, or qualifying the imputation attaching to facts, generally lets in evidence in reply; as, in such cases, the prisoner usually adverts, by evidence, to matter which it would have been impossible for the prosecutor to anticipate. The admissibility of evidence, in reply, may generally be determined by the answer to the questions: Could the prosecutor have foreseen this? Is it evidently new matter? Is the object of the further inquiry to re-establish the character of the witnesses impeached by evidence (not by declamation) in the course of the defense, or is it to impeach the character of the prisoner's witnesses? Cross-examination of such new witnesses, to an extent limited by the examination-in-chief, that is, confined to such points or matter as the prosecutor shall have examined on, is allowed on the part of the prisoner.

Triangles. A wooden instrument consisting of three poles so fastened at the top that they may spread at bottom in a triangular form, and by means of spikes affixed to each pole, remain firm in the earth. An iron bar, breast-high, goes across one side of the triangle. The triangles were used in some regiments for the purpose of inflicting military punishment when corporeal chastisement was much in vogue.

Triarii. In the Roman legions, consisted of veteran soldiers, who formed the third line in the order of battle.

Triballi. A powerful people in Thrace, a branch of the Getae dwelling along the Danube, who were defeated by Alexander the Great in 335 B.C., and obliged to sue for peace.

Tribune. In Roman antiquity, an officer or magistrate chosen by the people, to protect them from the oppression of the patricians or nobles, and to defend their liberties against any attempts that might be made upon them by the senate and consuls. The tribunes were at first two, but their number was increased ultimately to ten. There were also military tribunes, officers of the army, of whom there were from four to six in each legion.

Tribute. An annual or stated sum of money or other valuable thing, paid by one prince or nation to another, either as an acknowledgment of submission, or as the price of peace and protection, or by virtue of some treaty; as the Romans made their conquered countries pay tribute.

Trichinopoly. Capital of the district of the same name, of British India; in the presidency of Madras. It is pretty strongly fortified by walls about 2 miles in circuit, lofty, thick, and in some places double. There is also a fort built on a sienite rock about 600 feet high. Two or 8 miles southwest of the town is a large cantonment, containing barracks for a large number of troops. Trichinopoly was subject to a Hindoo rajah until 1732, when the nabob of Arcot gained possession of it; and in 1741 he was in turn dispossessed by the Mahrattas. During the wars between the French and English, the place was much contested; and in 1757, when besieged by the former, it was relieved by the rapid march of an English force under Capt. Calliaud.

Trick. A term used in heraldry to denote a mode of representing arms by sketching them in outline, and appending letters to express the tinctures, and sometimes numerals to indicate the repetition of changes.

Trident. In Roman antiquity, a three-pronged spear used in the contests of gladiators by the retiarius.

Trieste, or Trieste (anc. *Tergeste*, or *Tergestum*). The principal seaport city of the Austrian empire, in Illyria, on the Gulf of Trieste at the northeast extremity of the Adriatic Sea, 73 miles east-northeast of Venice. The ancient *Tergeste* first received historical mention in 51 B.C., when it was overrun and plundered by neighboring tribes. It owes its prosperity chiefly to the emperor Charles VI., who constituted it a free port, and to Maria Theresa. In 1797 and in 1805, it was taken by the French.

Trigger. A steel catch, which being pulled disengages the cock of a gunlock, and causes the hammer to strike the nipple in percussion-muskets, and the firing-pin in breech-loaders. The difference between a hair and common trigger is this: the hair-trigger, when set, lets off the cock at the slightest touch, whereas the common trigger requires a greater degree of force, and consequently its operation is retarded.

Trim. The chief town of the county of Meath, Ireland, on the Boyne, 27 miles northwest from Dublin. It was taken by Cromwell in 1649.

Trincomalee. A seaport town and magnificent harbor on the northeast coast of Ceylon. It is a place of great antiquity; it was here that the Malabar invaders of Ceylon built one of their most sacred shrines,—the "Temple of a Thousand Columns," which was demolished by the Portuguese, who fortified the heights with the materials derived from its destruction, 1622. It was next held by the Dutch; but in 1672, during the rupture between Louis XIV. and the United Provinces, the French took Trincomalee, which was abandoned by the Dutch in a panic. In 1782, the French admiral Suffrein, in the absence of the British commander, took possession of the fort, and the English garrison retired to Madras. It

was restored to the Dutch in the following year, and they retained it till the capture of Ceylon by the British in 1795. It was finally ceded to Great Britain, by the treaty of Amiens, in 1802.

Trinidad. An island belonging to Great Britain, and the most southerly of the West India Islands. It is separated from the mainland (Venezuela) by the Gulf of Paria. Trinidad was discovered by Columbus in 1498; and first colonized by the Spaniards, in 1588. In 1676, the French possessed it for a short time, but it was speedily restored to Spain; and in 1797, it was captured by the British, who have retained it ever since.

Trinobantes. A British tribe, which occupied Middlesex and Essex, and joined in opposing the invasion of Julius Cæsar, 54 B.C.; but they soon came to terms with the Romans.

Trinomalee. A town and fortress of India, in the Carnatic, where Col. Smith greatly distinguished himself against the united forces of Hyder Ali and Nizam Ali, subahdars of the Deccan, with an army of 43,000 horse and 28,000 foot; while the British commander had only 10,000 foot and 1000 horse. The result of this victory was that the Nizam detached himself from Hyder, and in February, 1768, concluded a treaty with the British.

Triparted. In heraldry, parted in three pieces; having three parts or pieces; as, a cross triparted.

Tripartite. Being of three parts, or three parties being concerned; hence, tripartite alliance, or treaty.

Triple Alliance. The name by which two different treaties are known in history, viz.: (1) A treaty concluded in 1668 at the Hague, between England, Holland, and Sweden, having for its object the protection of the Spanish Netherlands, and the checking of the conquests of Louis XIV. (2) An alliance concluded in 1717 between Britain, France, and Holland, against Spain, which included among its stipulations that the Pretender should quit France, and that the treaty of Utrecht should be carried into effect as regards the demolition of Dunkirk. The Protestant succession was guaranteed by this treaty in England, and that of the Duke of Orleans in France.

Tripoli, or Tripolis (in its modern Arabic form, *Tarabulus*). A seaport and one of the chief commercial towns of Syria, near the coast of the Mediterranean, on both sides of the river Kadisha. On the left side stands the castle built by Count Raymond of Toulouse, in the 12th century, when the city was taken by the Crusaders. It was conquered by the Egyptians in 1832; restored to the Porte, 1835, and it surrendered to the British in 1841.

Tripoli. A regency of the Ottoman empire, and the most easterly of the Barbary States, North Africa. The governor-general has the title, rank, and authority of a pasha of the Ottoman empire. The military

force of the country consists of a body of Turkish soldiers, some 10,000 in number, whose business is to keep down insurrections, but who were formerly wont to vary it by creating them. In ancient times, Tripoli seems to have been tributary to the Cyrenæans, from whom, however, it was wrested by the Carthaginians. It next passed to the Romans. Like the rest of Northern Africa, it was conquered by the Arabs, and the feeble Christianity of the natives was supplanted by a vigorous and fanatical Mohammedanism. In 1552 (1551), the Turks got possession of it, and have ever since been the rulers of the country, though the authority of the sultan, up till 1835, had been virtually at zero for more than a century. In that year, however, an expedition was dispatched from Constantinople; the ruling dey, Karamanli, was overthrown and imprisoned; a new Turkish pasha, with vice-regal powers, was appointed, and the state made an eyalet of the Ottoman empire. Several rebellions have since taken place (notably in 1842 and 1844), but they have always been suppressed.

Tripolitza ("three cities"). A town of Greece under the Turkish rule, 39 miles southwest from Corinth. In 1821 it was stormed by the Greek insurgents; and in 1828 razed to the ground by the troops of Ibrahim Pasha; it has since, however, been rebuilt.

Tripping. In heraldry, having the right fore foot lifted, the others remaining on the ground, as if he were trotting;—said of an animal, as a hart, buck, and the like, represented in an escutcheon.

Triumph (Lat. *triumphus*). Was the name given in ancient Rome to the public honor bestowed on a general who had been successful in war. It consisted in a solemn procession along the *Via Sacra* up to the Capitol, where sacrifice was offered Jupiter. The victor sat in a chariot, drawn by four horses,—his captives marching before, his troops following behind. Certain conditions had to be fulfilled before a triumph could be enjoyed, and it was the business of the senate to see that these were enforced. Under the empire, generals serving abroad were considered to be the emperor's lieutenants, and therefore, however successful in their wars, they had no claim to a triumph. They received instead *triumphal decorations*, and other rewards. The *ovation*, or lesser triumph, differs from the greater chiefly in these respects; that the imperator entered the city on foot, clad in the simple *toga prætexta* of a magistrate, that he bore no sceptre, was not preceded by the senate and a flourish of trumpets, nor followed by victorious troops, but only by the equites and the populace, and that the ceremonies were concluded by the sacrifice of a sheep instead of a bull. The *ovation*, it is scarcely necessary to add, was granted when the success, though considerable, did not fulfill the conditions specified for a triumph.

Triumph. To obtain victory; to meet with success.

Triumphal. Of or pertaining to triumph; used in triumph; indicating, or in honor of, a triumph or victory; as, a triumphal crown; a triumphal arch.

Triumphal Column. See COLUMN, TRIUMPHAL.

Triumphal Crown. See CROWN, TRIUMPHAL.

Triumphant. Celebrating victory; expressive of joy for success; as, a triumphant song.

Triumpher. One who was honored with a triumph in ancient Rome. One who triumphs or rejoices for victory; one who vanquishes.

Troje Ludus. Among the Romans was a species of mock fight, similar to the tournaments of the Middle Ages, performed by young noblemen on horseback, who were furnished with arms suitable to their age.

Trojan War. In classical history, a celebrated epoch, which occurred nearly thirteen centuries before the Christian era, and which has formed the subject of the two finest poems in the world,—Homer's "Iliad" and Virgil's "Æneid." This war was undertaken by the states of Greece to recover Helen, whom Paris, the son of Priam, king of Troy, had carried away from the house of Menelaus. (See TROY.)

Tromblon. A fire-arm which was formerly fired from a rest, and from which several balls and slugs were discharged. An ancient wall-piece.

Trombone. Formerly a species of blunderbuss for boat-service, taking its name from its unseemly trumpet mouth.

Troop. A company of cavalry. It is the same, with respect to formation, as a company in the infantry.

Troop Corporal-Major. The chief non-commissioned officer of a troop in the British Household Cavalry.

Troop Sergeant-Major. In the British service, is the chief sergeant of a troop.

Trooper. A private or soldier in a body of cavalry; a horse-soldier.

Trooping the Colors. Is a ceremony performed in the British service, at the public mounting of garrison guards.

Troop-ship. A merchant ship "taken up," as it is called, for the conveyance of soldiers by sea.

Trophy. Was a memorial of victory erected on the spot where the enemy had turned to flight. Among the Greeks (with the exception of the Macedonians, who erected no trophies) one or two shields and helmets of the routed enemy placed upon the trunk of a tree served as the sign and memorial of victory. After a sea-fight the trophy consisted of the beaks and stern-ornaments of the captured vessels, set up on the nearest coast. It was considered wrong to destroy such a trophy, and equally wrong to repair it when it had fallen down through time, for animosity ought not to be perpetual.

In early times the Romans never erected trophies on the field, but decorated the buildings at Rome with the spoils of the vanquished. In later times pillars and triumphal arches were employed to commemorate victories. Besides these, in modern times, the humiliation of an enemy is rendered lasting by such devices as the bridge of Jena, of Waterloo, and by the distribution of captured cannon. Morally considered, this practice is no improvement upon the simple and perishable trophies of the ancient Greeks.

Trophy-money. Was certain money formerly raised in the several counties of the kingdom of Great Britain, towards providing harness and maintaining the militia.

Trossulum (now *Trusso*). A town in Etruria, 9 miles from Volturni, which is said to have been taken by some Roman equites without the aid of foot-soldiers; whence the Roman equites obtained the name of *Trossuli*. Some writers identify this town with Troilium, which was taken by the Romans 298 B.C.; but they appear to have been different places.

Trou de Loup (Wolf-hole). In field fortification, is a round hole, about 6 feet deep, and pointed at the bottom, like an inverted cone, with a stake placed in the middle. *Trous de loup* are frequently dug round a redoubt to obstruct the enemy's approach. They are circular at the top, of about 4½ feet in diameter.

Trou de Rat (*Fr.*). Literally, a rat-hole, or rat-catch; figuratively, any disadvantageous position into which troops are rashly driven.

Trowel Bayonet. So called from its shape. A bayonet intended to serve also as an entrenching tool; invented by Lieut. Rice, 5th U. S. Infantry. It is used by part of the U. S. troops at the present time (1880).

- **Troy.** The earliest traditions of the Greek people represent the country on both sides of the *Ægean* as peopled by various races, either of genuine Hellenic, or of closely affiliated tribes. Among those who peopled the eastern Asiatic coast were the Trojans. The story of the Trojan war is extremely simple. The Trojans, in the person of Paris, or Alexander, the son of the reigning monarch, Priam, are represented as having had certain dealings with the Achæans, or Greeks of the Peloponnesus, in the course of which the gay young prince carries off from the palace of Menelaus, king of Sparta, his spouse Helen, the greatest beauty of her age. To revenge this insult, the Greeks banded themselves together and sailed against Troy with a large fleet. The most notable of the tribes who took part in this expedition were the Argives, or Achæans, the Spartans, the Bœotians, and the Thessalians. Of the Thessalians, the most prominent captain was Achilles; and the general command of the whole expedition was committed to Agamemnon, king of Mycenæ. This well-appointed European army is represented as having spent nine years in besieging the

god-built walls of the city of Priam without making any impression on its strength. A violent quarrel between Achilles and Agamemnon, breaking out in the tenth year, so weakened the invading force that the Trojans, under Hector, pushed the Greeks back to the very verge of the sea, and almost set their ships on fire. At the critical moment, however, the Thessalian captain was reconciled to the head of the expedition; and with his return to the field the fortune of war changed; Hector, the champion of Troy, fell, and the impending doom of the city was darkly foreshadowed; it was finally captured and sacked, 1184 B.C. (the date generally accepted).

Troyes. A town of France, capital of the department of Aube, on the left bank of the Seine. It occupies the site of the ancient Augustobono, the chief town of the Tricasses. It suffered severely in the civil wars of the 15th century, and was taken by Joan of Arc in 1429. A treaty was concluded here between England, France, and Burgundy, May 21, 1420, whereby it was stipulated that Henry V. should marry Catherine, daughter of Charles VI., be appointed regent of France, and after the death of Charles should inherit the crown. Troyes was taken by the allied armies February 7; retaken by Napoleon February 23; and again taken by the allies March 4, 1814.

Truce. An agreement between belligerent parties, by which they mutually engage to forbear all acts of hostility against each other for some time, the war still continuing. Truces are of several kinds: *general*, extending to all the territories and dominions of both parties; and *particularly*, restrained to particular places; as, for example, by sea, and not by land. They are also *absolute*, *indeterminate*, and *general*; or *limited and determined* to certain things, for example, to bury the dead. During a truce, it is dishonorable to occupy more advanced ground, or to resort to any act which would confer advantage. A truce requires ordinarily to be confirmed by the commander-in-chief to become binding. It is lawful to break it before the prescribed period, on notice previously agreed on being given to the opposite party. This is called denouncing a truce.

Truce, Flag of. See FLAG OF TRUCE.

Truce of God. A suspension of arms, which occasionally took place in the Middle Ages, putting a stop to private hostilities, at or within certain periods.

Truck. Wooden wheels for the carriage of cannon, etc. The trucks of garrison-carriages are generally made of cast iron. Trucks of a ship-carriage are wheels made of one piece of wood, from 12 to 19 inches in diameter, and their thickness is always equal to the caliber of the gun.

Truck, Casemate. See IMPLEMENTS.

Trumpet, or Trump. A wind instrument, made of brass or silver, used in the cavalry and mounted artillery.

Trumpet-call. A call by the sound of the trumpet.

Trumpeter. A soldier whose duty it is to sound the trumpet.

Trumpet-Major. The non-commissioned officer in charge of the trumpeters of a regiment of cavalry.

Truncheon. A club; a cudgel; also, a staff of command. The truncheon was for several ages the sign of office. Generals were presented with the truncheon as the sign of investiture with command; and all those officers who belonged to the suite of the general, and were not attached to regiments, carried a truncheon, or staff, whence the name of officers of the staff.

Trunnion-gauge. See INSPECTION OF CANNON.

Trunnion-plate. In gunnery, is a plate in the carriage of a gun, mortar, or howitzer, which covers the upper part of the cheek, and goes under the trunnion.

Trunnions. In gunnery, are two cylinders at or near the centre of gravity of a gun, by which it is supported on its carriage. The axes are in a line perpendicular to the axis of the bore, and, in our guns, in the same plane with that axis. By means of the trunnions the piece is attached to its carriage; and by being placed at or near the centre of gravity, it is easily elevated or depressed.

Trunnion-square. See INSPECTION OF CANNON.

Truxillo. A town of the republic of Venezuela, capital of a province of the same name. Though now a poor, mean place, it is said to have been, previously to 1678, when it was pillaged by the buccaneer Grammont, one of the finest and wealthiest cities of America.

Tubantes. A people of Germany, allies of the Cherusci, originally dwelt between the Rhine and the Yssel. They are subsequently mentioned as a part of the great league of the Franks.

Tube-pouch. See IMPLEMENTS.

Tuberated. In heraldry, knotted or swelled out.

Tuck. A long, narrow sword.

Tudela (anc. Tutella). A city of Spain, province of Navarre, on the right bank of the Ebro, 52 miles northwest from Saragossa. Here the French under Marshal Lannes totally defeated the Spaniards, on November 28, 1808.

Tugenbund ("League of Virtue"). This league was formed in Prussia soon after the peace of Tilsit, June, 1807, for relieving the sufferers by the late wars, and for the revival of morality and patriotism, gradually became a formidable secret political society, opposed to the French predominance in Germany. It excited the jealousy of Napoleon, who demanded its suppression in 1809. It was dissolved at the peace in 1815.

Tuileries, Palace and Gardens of the. Are situated in the middle of Paris, on the right bank of the Seine. In 1793, the Na-

tional Convention held its sittings in the Tuileries; and when Bonaparte became First Consul, he chose it for his official residence. It was the imperial residence of Napoleon III.; but was burned down by the Commune in 1871.

Tulwar. In the East Indies means a sword.

Tumbril. A covered cart on two wheels, for the carriage of ammunition, tools, etc., belonging to the artillery. The name obtained a melancholy celebrity from being applied to the carts which served to carry the unfortunate victims of the French revolution to the guillotine.

Tunic. A close-fitting coat, with short sleeves, worn in ancient times by the Romans. This sort of clothing was prevalent among the French after their return from the Crusades to the Holy Land. They adopted it from the Saracens, and seemed ambitious of appearing in a garb which bore testimony to their feats of valor. These tunics, which were converted into a sort of uniform, obtained the name of *saladines* among the French, in compliment to the emperor Saladin.

Tunis. One of the Barbary States forming a considerable territory or regency of the Ottoman empire, in Northern Africa. Its history is nearly identical with the city of the same name (which see).

Tunis. A fortified city of Africa, and the capital of the country of that name, at the mouth of the Mejerdah, 400 miles east by north from Algiers. Tunis is situated about 8 miles to the southwest of the ruins of ancient Carthage, and it is itself a place of great antiquity. During the Punic wars it was repeatedly taken and retaken. In 489 it fell into the hands of the Vandals, but having been wrested from them about a century thereafter by Belisarius, it continued to be subject to the Greek empire till the end of the 7th century, when Northern Africa was overrun by the victorious armies of the Saracens and became a dependency of the caliphs of Bagdad. In 1286 Tunis became an absolute sovereignty under Abou-Ferez, who soon added the greater part of Algiers and Tripoli. About this time it became notorious for its piracies, and in 1270, Louis IX. of France, in a chivalrous attempt to suppress them, lost both his army and his life. It remained under African kings till taken by Barbarossa, for Solymán the Magnificent. It was taken with great slaughter, and Barbarossa expelled, by the emperor Charles V., when 10,000 Christian slaves were set at liberty, 1535. The country was subjugated by the Turks (1674), who at first governed it by a Turkish pasha and divan, with a body of Janissaries sent from Constantinople, but were ultimately obliged to allow the Moors to elect their own bey, only reserving to themselves the power of confirming the election and exacting a tribute. The piracies of the Tunisians subjected them to severe chastisement, first from the British

under Admiral Blake, who reduced it, on the bey refusing to deliver up the British captives, 1655; and afterwards from France and Holland. During the 18th century it became tributary to Algiers. About the beginning of the 19th century, Hamuda Pasha threw off the Algerian yoke, subdued the Turkish militia, and created a native Tunisian army; in consequence of which Tunis virtually attained independence. An insurrection broke out April 18, 1864, and in May, the European powers sent ships of war to protect their subjects.

Turin. A large city of Italy, capital of Piedmont, at the confluence of the Dora-Susina with the Po, 79 miles west-southwest from Milan. The foundation of Turin is generally attributed to a colony of Transalpine origin called Taurini, or Taurisci. Shortly after Hannibal crossed the Alps, he made himself master of the territory in which it is situated; but after his expulsion from Italy, the Romans resumed possession and converted Turin into a colony, which took the name of *Colonia Julia*. This name was afterwards changed into that of *Augusta Taurinorum*. It was taken and sacked by the Goths under Alaric. To ward off similar disasters, it was shortly after surrounded by walls, but did not escape the ravages of the Longobards. Charlemagne, into whose hands it subsequently passed, bestowed it as feudal tenure on its bishops. In 1418 (1416) it was declared by Amadeo V. the capital of the states of Savoy, and ultimately rose to be the capital of the whole Sardinian states. The French besieged this city; but Prince Eugène defeated their army, and compelled them to raise the siege, September 7, 1706. In 1798, the French republican army took possession of Turin, seized all the strong places and arsenals of Piedmont, and obliged the king and his family to remove to the island of Sardinia. In 1799 the French were driven out by the Austrians and Russians; but shortly afterwards the city and all Piedmont surrendered to the French. In 1814, it was delivered up to the allies, who restored it to the king of Sardinia.

Turkey. Or the Ottoman empire, called by the Turks *Osmanli Vilayeti*, includes large portions of the continents of Europe, Asia, and Africa, and consists of Turkey Proper, which is under the direct rule of the sultan, and of numerous dependent and tributary states, governed by their own princes. The existing Turkish empire dates only from the end of the 13th century, when it was founded by Osman, or Othman, a Turk of noble family, who had been driven westward from Khorasan by the invasion of Genghis Khan. Osman first invaded the Greek territory of Nicomedia on July 27, 1299; but the true era of the empire may be dated from the conquest of the city of Prusa, the capital of Bithynia, which surrendered to his son Orchan in 1326. Murad I. (Amurath) subdued, without resistance, the whole of Thrace from the Hellespont to

Mount Hæmus, and made Adrianople the seat of vice-royalty. Murad was succeeded by his son Bajazet (Byazid), whose reign forms one of the most splendid epochs in the Turkish annals. His armies were victorious in every country that he undertook to conquer, until at last he encountered the famous Mogul chief, Tamerlane, who defeated the Turkish army and took Bajazet captive. After the death of Tamerlane, Solymán, the son of Bajazet, obtained the European dominions of his father and eventually assumed the title of sultan. At his death in 1421 he bequeathed an undivided empire to his successor, Amurath II., in whose reign the Turkish empire rose in splendor and opulence. He enlarged the empire by conquests, and was succeeded in 1451 by Mohammed II., the conqueror of Constantinople. Mohammed laid siege to Belgrade, three years after the taking of Constantinople, from which, after an obstinate resistance, he was at length repulsed with the loss of his large ordnance and 40,000 of his best troops. Abandoning his attempts upon Hungary, the sultan undertook an expedition into Greece, and about 1460 succeeded in subduing the whole of the Morea. Mohammed continued to overrun Europe with his victorious armies, until death stopped his triumphant career in 1481. A series of domestic broils continued to take place until Selim ascended the throne in 1512. He was a successful prince, and during his short reign conquered Egypt, Aleppo, Antioch, Tripoli, Damascus, and Gaza, and defeated the Persians. On the death of Selim, Solymán the Magnificent ascended the Ottoman throne, and like several of the preceding monarchs he continued to humiliate his enemies and add new territory to his dominions. His dominions extended from Algiers to the river Euphrates, and from the farther end of the Black Sea to the extremity of Greece and Epirus. The latter years of his reign were embittered by domestic dissensions and cruelties. He died while besieging Sigeth, a city of Hungary, in 1566. His son and successor, Selim II., besieged and took Cyprus; but in the famous sea-fight at Lepanto, in 1571, the Turkish fleet was utterly destroyed by Don John of Austria. Selim afterwards invested and took Tunis by storm. On his death Amurath III. ascended the throne, and extended his dominions. His son, Mohammed III., ascended the throne in 1595, but he was involved in a series of wars which proved disastrous to the Turkish arms, and the country continued to decline, although each successive monarch continued to wage war with the neighboring provinces, which nearly always ended disastrously to the Turkish arms; the country was also torn asunder by internal strife. The downward course of Turkey was for a time stayed by Mustapha II., who succeeded to the throne in 1695; he commanded his troops in person, and passed the Danube at the head of 50,000 men, carried Lippa by

assault, and closed a campaign against the Austrians with success. But two years afterwards he was defeated by Prince Eugène, in the bloody battle of Zenta, where the Turks left 20,000 dead on the field, and 10,000 were drowned in their attempt to escape. Shortly after this disaster Mustapha was dethroned. During the reign of Mustapha III., in 1769, a destructive war broke out with Russia which lasted till 1774, when the Turks were compelled to make the dishonorable treaty of Kainargi. Another disastrous war broke out between Russia and Turkey in the autumn of 1787, in which Austria took sides with the former. This war, which was concluded in 1792, was a series of terrible conflicts, in which much desperate valor was displayed on the one side, and many brave actions were performed on the other; but in which Turkey lost much territory. Turkey was drawn into the French revolutionary war by the invasion of Egypt by the French, and in 1807 she was convulsed by a sanguinary insurrection, which cost Selim his throne, and raised Mahmoud to it. During the event of this insurrection, a war which had been going on with Russia had languished; but on the accession of Mahmoud, the armies on both sides were augmented, and the contest was carried on with great ferocity. The campaign of 1811 was short, but disastrous to the Porte, the main body of the Ottoman army having surrendered as prisoners of war. In 1821 began that celebrated insurrection which, after a bloody war of eight years, terminated in the complete emancipation of the Greeks from the Turkish yoke. In 1828 war again broke out between Turkey and Russia. The first campaign was unfavorable to Turkey, but not completely decisive; it ended with the loss of Varna; but, in 1829, the Russians having crossed the Balkans, a treaty of peace was concluded, which was both humiliating and injurious. Shortly after occurred that rupture between the sultan and Mehemet Ali, the pasha of Egypt, which shook the Ottoman empire to its foundation. In every conflict the Turkish troops were overthrown. The battle of Homs decided the fate of Syria, and the victory at Konieh placed the sceptre almost within the grasp of the ambitious pasha. In this extremity the sultan was reduced to apply to Russia for aid. A peace was concluded by which the pasha augmented his territory. In 1839 the Turks were again defeated in several battles by the Egyptians; but the latter were reduced to subjection by the allied powers, Britain, Austria, Russia, and Prussia, and compelled to pay an annual tribute to Turkey. In October, 1853, the Porte declared war against Russia, and in 1854 the French and English entered into the contest as allies of Turkey. In the latter part of this war, Sardinia also sent an army to co-operate with those of the allies. The result of this war, which was virtually ended by the treaty of Paris signed on March 30, 1856, was, that Turkey gained

some territory, and took her place as a member of the European confederation of states. A revolution took place in Constantinople in 1876, which resulted in the deposition of Abd-ul-Aziz, and the accession to the throne of Murad V., who in his turn was superseded by Hamid II. For important battles, etc., which occurred in Turkey, see names of towns, places, etc., under separate headings in this work.

Turks. The name of a numerous, important, and widely-spread family of the human race, members of which are to be found as well on the banks of the Lena in Siberia, as on those of the Danube and the shores of the Adriatic in Europe. They consist of many different tribes, but speak very nearly the same language. For history of the Turks, see **TURKEY** and other countries inhabited by them.

Turma. In the Roman cavalry, a troop consisting of 80 horsemen. There were 10 *turme* in every legion, and 8 *decuriae* in every *turma*.

Turn. To give another direction, tendency, or inclination; to direct otherwise; to deflect. *To turn a hostile army*, to turn the enemy's flank, and the like, to pass round and take a position behind it, or upon the side of it. *To turn tail*, to retreat ignominiously.

Turn Out, To. To bring forward, to exhibit; as, to turn out the guard; to turn out so many men for service. *To turn in*, to withdraw; to order under cover; as, to turn in the guard.

Turnau (Boh. Turnov). A walled town of Bohemia, circle of Jung-Bunzlau, on the east bank of the Iser, 50 miles northeast from Prague. Here was fought, in July, 1866, a battle between the Prussians and Austrians, in which the former were victorious.

Turnhout. A well-built town of Belgium, province of Antwerp, 34 miles east-northeast from the city of Antwerp. Turnhout is historically noteworthy as the scene of two battles, the first won January 22, 1697, by the Netherlands, under Maurice, prince of Orange, over the Spaniards; and the second October 27, 1789, by the patriots, under Van der Mersch, over the Austrians.

Turning. In tactics, a manœuvre by which an enemy or position is turned.

Turning and Boring. See **ORDNANCE, CONSTRUCTION OF.**

Turret. In military antiquity, a movable building, of a square form, consisting of 10 or even 20 stories, sometimes 120 cubits high, usually moved on wheels, and employed in approaches to a fortified place, for carrying soldiers, engines, ladders, casting bridges, and other necessities.

Turtukai, or Tortokan. A town of Turkey in Europe, in Bulgaria, situated on the Danube. It is opposite Oltenitza, where the Russians were defeated by the Turks in a series of battles which extended over three days, in November, 1853.

Tuscany (Ital. *Toscana*). A former grand duchy of Italy, bounded on the north by the duchies of Parma and Modena, and the Papal States; east and south by the Papal States; west by the Mediterranean. Tuscany embraces the far greater part of ancient Etruria, shared the common fate of all the other Italian states, and fell under the Romans about 280 B.C. From the Romans it passed first to the Goths, next to the Lombards, and then to Charlemagne, who governed it by counts. After numerous vicissitudes, the whole of Tuscany became united, in 1557, under the Medici family. In 1787 the Medici became extinct and the grand duchy passed to the Duke of Lorraine. It was declared by Napoleon I. an integral part of the French empire; but, on his downfall in 1814, it was restored to the Archduke Ferdinand. On August 20, 1860, the National Assembly at Florence unanimously voted its annexation to it and it now forms part of the new kingdom of Italy.

Tuscaroras. A tribe of North American Indians, who at the settlement of North Carolina had fifteen towns on the Tar and Neuse Rivers, and 1200 warriors. In 1711, they began a war with the settlers, and after a series of savage encounters were defeated, and joined the Iroquois in New York, where they became the allies of the English. About 400 of them still reside on a reservation in the western part of the State of New York.

Tusculum. An ancient city of Latium, on a western prolongation of the Alban hills, about 15 miles east-southeast of Rome. It was one of the most strongly fortified places in all Italy, both by nature and art. After the expulsion of the Tarquins from Rome, Octavius Mamilius, the chief man in Tusculum, is said to have supported their cause, and led an army against the Romans; but he was totally defeated and slain at the small lake Regillus, near Tusculum. Thereupon an alliance was formed between Tusculum and Rome, which lasted unbroken for 140 years, until, in 357 B.C., the whole of the Latin cities, and Tusculum among the rest, joined in a war with Rome, which ended in their entire and final subjection to that power. The ancient city continued to exist amid all the vicissitudes of the times till near the end of the 12th century, when it was demolished by the Romans, and the town of Frascati rose in the vicinity.

Tuttlingen. A town of Württemberg, on the right bank of the Danube, 20 miles west-southwest from Sigmaringen. Tuttlingen is historically notable as the scene of a battle in 1648, during the Thirty Years' War, in which an Austrian Bavarian force under Hatzfeld and Mercy defeated the French.

Twist. This term is employed by gun-makers to express the inclination of a groove at any point, and is measured by the tangent of the angle made by the groove with the axis of the bore.

Two-handed. Used with both hands; as, a two-handed sword.

Tyana (ruins at *Kiz Hisar*). A city of Asia Minor, stood in the south of Cappadocia, at the northern foot of Mount Taurus, on the high road to the Cilician Gates. It was a position of great natural strength, which was improved by fortifications. Under Caracalla it was made a Roman colony. It was taken in 272 B.C. by Aurelianus, in the war with Zenobia, to whose territory it then belonged.

Tycocktow Island. An island in the Canton River, China, 8 miles long and 6 miles broad. It is situated at the entrance of the Booca Tigris, a few miles below Canton. The British took the fort on this island in 1841.

Tykoecin. A town of Russia in Europe, situated on the Narew, 17 miles northwest from Bialystock. A battle was fought between the Russians and Poles here in 1831.

Tyler's Insurrection. Arose in opposition of the poll-tax imposed on all persons above fifteen, November 5, 1880. One of the collectors acting with indecent rudeness to Wat Tyler's daughter, the father struck him dead, June, 1881. His neighbors took arms to defend him, and in a short time almost the whole of the population of the southern and eastern counties were in a state of insurrection, extorting freedom from their lords, and plundering. On June 12, 1881, they gathered upon Blackheath to the number of 100,000 men. On June 14, they murdered Simon of Sudbury, archbishop of Canterbury, and Sir Robert Hales, the royal treasurer. The king, Richard II., invited Tyler to a parley, which took place on the 15th at Smithfield, where the latter addressed the king in a menacing manner, now and again lifting up his sword. On this the mayor, Walworth, stunned Tyler with a blow of his mace, and one of the king's knights dispatched him. Richard temporized with the multitude by promising them a charter, and thus led them out of the city, when Sir R. Knollys and a band of knights attacked and dispersed them with much slaughter. The insurrection in Norfolk and Suffolk was subdued by the bishop of Norwich, and 1500 of the rebels were executed.

Tympanum. A drum, a musical instrument which the ancients used, and which consisted of a thin piece of leather or skin, stretched upon a circle of wood or iron, and beat with the hand. Hence the origin of our drum.

Tyrant. A name given in modern times to an arbitrary and oppressive ruler, but originally applied, not necessarily to one who exercised power badly, but merely to one who had obtained it illegally, and therefore equivalent to our word usurper. If the one who thus rose to power as a "tyrant" happened to be a man of sense, and wisdom, and generosity, his "tyranny" might prove a blessing to a state torn by the animosities of selfish oligarchs, and be the theme of praise in after-ages, as was the case with the "tyrannies" of Pisistratus, Gelon, and

others; but if he was insolent, rapacious, and cruel, then he sought to reduce the citizens to a worse than Egyptian bondage, and his name became infamous to all time. Such has been the fate of most of the "Thirty Tyrants of Athens." It was the method of exercising authority pursued by these and similar usurpers that latterly, even in ancient times, gave the word tyrant that evil significance it has ever since uninterruptedly retained.

Tyre (ruins at *Sur*). One of the greatest and most famous cities of the ancient world, stood on the coast of Phœnice, about 20 miles south of Sidon. The Assyrian king Shalmanezar laid siege to Tyre for five years (718 B.C.), but without success. It was again besieged for thirteen years by Nebuchadnezzar, and there is a tradition that he took it (572 B.C.), but the matter is not quite certain. At the period when the Greeks began to be well acquainted with the city, its old site had been abandoned, and a new city erected on a small island about half a mile from the shore, and a mile in length, and a little north of the remains of the former city, which was now called Old Tyre. In 322 B.C. the Tyrians refused to open their gates to Alexander, who laid siege to the city for seven months, and united the island on which it stood to the main land by a mole constructed chiefly of the ruins of Old Tyre. After its capture and sack by Alexander, Tyre never regained its former consequence. It recovered, however, sufficiently to be mentioned as a strong fortress and flourishing port under the early Roman emperors; it even took an active part (193) in the contest between Septimius Severus and Pescennius Niger, which, resulting in the success of the former, brought back to it some of its ancient distinction. In St. Jerome's time it was again one of the noblest and most prosperous cities of the whole East. In the 7th century it came under the dominion of the Saracens; and so remained until taken by the Crusaders. On February 11, 1124, the Christian army encamped before it, and on June 15 it fell into their hands. The strength of its fortifications, the splendor of its houses, and the excellence of its harbor, excited their admiration. On the evening of the day on which Acre was taken by the

Mohammedans (May 19, 1291), Tyre was abandoned by the Crusaders, and the Saracens entered it the following morning. It was captured by the French, April 8, 1799; and by the allied fleet, during the war against Mehemet Ali, 1841.

Tyrol. The most western province of the Austrian empire, is bounded on the north by Bavaria, on the east by Salzburg, Carinthia, and Venetia, on the south by Italy, and on the west by Switzerland and Italy. In early times Tyrol formed part of Rætia, was conquered by the Romans, 15 B.C. Subsequently it was overrun by various German tribes; still later the southern valley fell to the share of the Lombards, and the northern valleys to the Bavarians. The dukes of Austria acquired possession of it in 1363. The French conquered Tyrol in 1805, and united it to Bavaria, much to the discontent of the population; but in 1809 an insurrection broke out, headed by Andreas Hofer, an innkeeper, who drove the Bavarians out of the Tyrol, and thoroughly defeated some French detachments, but was overpowered at last by reinforcements sent from France. The Tyrolese riflemen were very effective in the Italian war in 1859.

Tyrone. An inland county of the province of Ulster, in Ireland. According to some authorities the Erdini, and to others the Scoti, were the earliest known inhabitants of this district. The chief town of Tyrone was Dungannon, which, though several times taken and sacked by the English forces in their attempts to reduce the country to obedience to the royal authority, continued to be of importance until the close of the reign of Elizabeth, when it was burned by Hugh O'Neill, earl of Tyrone, to prevent its falling into the hands of the English. The insurrection of 1641 may be said to have had its commencement in this county, by the capture of Charlemont Fort and Dungannon by Sir Phelim O'Neill; and in 1646 the Parliamentary forces under Gen. Munroe received a signal defeat from Hugh Roe O'Neill at Benburb. During the greater part of the war between King William and King James, this county was in the possession of the forces of the latter, and suffered much from the partisan warfare carried on chiefly by the townsmen of Enniskillen.

U.

Ucles. A fortified town of Spain, in the province of Cuenca, 40 miles southwest from the town of that name. It stands at the foot of a hill crowned by a famous monastery which belonged to the military order of Santiago or St. James of Spain. It was taken by the French in 1809.

Uglitch. A town of European Russia, in the government and 60 miles west-southwest from Jaroslav, on the right bank of the Volga. It was destroyed by the Lithuanians in 1607.

Uhlans (a Tartar word signifying "brave"). Light cavalry of Asiatic origin, were introduced into the north of Europe along with the colonies of Tartars, who established themselves in Poland and Lithuania. They were mounted on light active Tartar horses, and armed with sabre, lance, and latterly with pistols. Their lance was from $5\frac{1}{2}$ to $6\frac{1}{2}$ feet in length, and, like that of the modern lancers, was attached to a stout leather thong or cord, which was fastened to the left shoulder and passed round behind the back, so as to allow the lance to be couched under the right arm. Immediately below its point was attached a strip of gaudy-colored cloth, the fluttering of which was designed to frighten the enemies' horses. The early dress was similar to that of the Turks, and the regiments, or *polks*, were distinguished from each other by the red, green, yellow, or blue color of their uniforms. The Austrians and Prussians were the first to borrow this species of cavalry from the Poles. In 1784, an attempt was made by Marshal Saxe to introduce uhlans into France, and a "polk" of 1000 men was formed; but it was disbanded at the author's death. At the present time, Russia, Prussia, and Austria are the only powers which possess uhlan regiments. In the British army, the place of the uhlans is occupied by hussars.

Ukraine. The name given in Poland first to the frontiers towards the Tartars and other nomads, and then to the fertile regions lying on both sides of the middle Dnieper, without any very definite limits. The Ukraine was long a bone of contention between Poland and Russia. It was ceded to the Cossacks by Poland in 1672, and was obtained by Russia about 1682. The country was divided, Poland having the west side of the Dnieper, and Russia the east. The whole country was assigned to Russia by the treaty of partition in 1796. See **POLAND**.

Ulans. See **UHLANS**.

Ulm. The second city of Württemberg; was, till the war in 1866, a stronghold of the

Germanic Confederation. Here a peace was signed, July 8, 1620, by which Frederick V. lost Bohemia (having been driven from it previously). Ulm was taken by the French in 1796. After a battle between the French and Austrians, in which the latter under Gen. Mack were defeated with dreadful loss by Marshal Ney, Ulm surrendered with 28,000 men, the flower of the Austrian army, October 17-20, 1805.

Ulster. A province of Ireland, the most northern of the four into which that kingdom is divided. The northeast portion, the present county of Down, was, early after the invasion, overrun by the English under De Courcy, and was subsequently held by Hugh De Lacy. Although various efforts were made by the English to effect a permanent settlement in the north and northwest, their success was little more than nominal until the reigns of Elizabeth and James I., when the well-known plantation of Ulster was attempted.

Ulster Badge. On the institution of the order of Baronets in England by James I., a sinister hand, erect, open, and couped at the wrist gules, the armorial ensign of the province of Ulster, was made their distinguishing badge, in respect of the order having been intended for the encouragement of plantations in the province of Ulster. This badge is sometimes borne in a canton, sometimes on an escutcheon, the latter placed either in the fess point or in the middle chief point, so as to interfere as little as possible with the charges of the shield.

Ulster King-of-Arms. The king-of-arms or chief heraldic officer of Ireland. A king-of-arms called Ireland existed in the time of Richard II., but the office seems to have fallen into abeyance in the following century. Ulster was created to supply his place in 1552. Ulster holds his appointment from the crown, and acts under the immediate direction of the lord-lieutenant of Ireland; the professional staff under him consists of 2 heralds, 4 pursuivants, 1 registrar, and 1 clerk of records. The official arms of Ulster king-of-arms are: Argent, St. George's cross gules, on a chief of the last a lion passant gardant between a harp and a portcullis or.

Ultimatum. A term used in military negotiations, to express the final conditions upon which any proposition or treaty can be ratified.

Umbo (*Fr.*). The pointed boss or prominent part in the centre of a shield or buckler.

Umbria. A district of Italy, the chief

towns of which were Arminum, Fanum, Fortune, Mevania, Tuder, Narnia, and Spoletium. Under Augustus, it formed the sixth Regio of Italy. Its inhabitants, the Umbri, were one of the most ancient races of Italy, and were connected with the Opicans, Sabines, and those other tribes whose languages were akin to the Greek. The Umbri were at a very early period the most powerful people in Central Italy, and extended across the peninsula from the Adriatic to the Tyrrhene seas. They were afterwards deprived of their possessions west of the Tiber by the Etruscans, and confined to the country between this river and the Adriatic. Their territories were still further diminished by the Senones, a Gallic people, who took possession of the whole country on the coast, from Arminum to the *Æsis*. The Umbri were subdued by the Romans, 307 B.C., and after the conquest of the Senones by the Romans in 288, they again obtained possession of the country on the coast of the Adriatic. This district, however, continued to be called *Ager Gallicus* down to a late period.

Umbriere. The visor of a helmet, a projection like the peak of a cap, to which a face-guard was sometimes attached, which moved freely upon the helmet, and could be raised like a beaver.

Unarm. To strip of armor or arms; to disarm.

Unbreach. To free the breach of, as a cannon, from its fastenings or coverings.

Uncase, To. To display or exhibit the colors of a regiment.

Uncock. To let down the cock of, as a gun.

Unconditional. At discretion; not limited by any terms or stipulations; as, an unconditional surrender.

Unconquered. Not subdued or defeated; in opposition to conquered or defeated.

Uncover, To. When troops deploy, the different leading companies or divisions, etc., successively uncover those in their rear, by marching out from the right or left of the column.

Undaunted. Not appalled by fear; valiant.

Under. A preposition of varied military application, in combination with other words. Thus troops are said to be *under arms*, when assembled in a state of military array, and having the necessary weapons of offense and defense, as rifles, swords, etc. To be *under command* is being liable to be ordered on any particular duty. To be *under cover* is to be shielded or protected. To be *under contribution* is being liable to give, in money or kind, what may be authoritatively called for. Countries are sometimes put under contribution for the support of an army. To be *under fire* or be *cool* is not being disconcerted by the apprehension of death in battle. To be *under sentence* is the liability to punishment, according to sentence passed; as, under the sentence of a general court-martial; under sentence of death.

Under Canvas. In a military sense, it is to be lying in tents.

Undermine. To dig an excavation under any fort, house, or other building, so as to cause it to fall down or to blow it up with powder.

Under-officer. An inferior officer, one in a subordinate situation.

Undisciplined. Not yet trained to regularity or order; not perfect in exercise or manœuvres.

Undress. In the military service, is the authorized habitual dress of officers and soldiers when not in full uniform.

Unfix, To. To take off; as, to unfix bayonets, on which the soldier disengages the bayonet from his musket, and returns it to the scabbard.

Unfortified. Not strengthened or secured by any walls, bulwarks, or fortifications.

Unfortunate Peace, The. A name given by historians to the peace of Chateau Cambresis (April 2, 1559), negotiated by England, France, and Spain. By this treaty Henry II. of France renounced all claim to Genoa, Corsica, and Naples, agreed to restore Calais to the English within eight years, and to give security for 500,000 crowns in case of failure.

Unfurled. A standard or color when expanded and displayed, is said to be unfurled.

Ungentlemanlike or Unofficerlike. Not like a gentleman or officer. Conduct unbecoming the character of either is so called. This clause, which will be always found to depend on the state of morals and manners, affords a vast latitude to a military court, which, after all, is not more free from prejudice or influence than any other tribunal, though they are both jurors and judges. Officers convicted thereof are to be dismissed from the service. See APPENDIX, ARTICLES OF WAR, 60, 61.

Unguled. In heraldry, a term applied to the tincture of the hoofs of an animal; e.g., Azure, a stag trippant or, attired and unguled gules, the arms of the family of Strachan in Scotland.

Unharnessed. Disarmed; divested of armor or weapons of defense.

Unhelmed. Divested of the helmet or helm.

Unhorsed. Thrown from the saddle; dismounted.

Unicorn (Lat. *unum cornu*, "one horn"). An animal, probably fabulous, mentioned by ancient Grecian and Roman authors as a native of India, and described as being of the size of a horse, or larger, the body resembling that of a horse, and with one horn of a cubit and a half or two cubits long on the forehead, the horn straight, its base white, the middle black, the tip red. The body of the animal was also said to be white, its head red, its eyes blue. It was said to be so swift that no horse could overtake it. The unicorn is perhaps best known as a heraldic charge or supporter. Two unicorns were borne as supporters of the Scottish royal

arms for about a century before the union of the crowns; and the sinister supporter of the insignia of the United Kingdom is a unicorn argent, armed crined, and unguled or, gorged with a coronet composed of crosses patée and fleurs-de-lis, with a chain affixed, passing between the fore legs, and reflexed over the back, of the last.

Unicorn. The old name for the howitzer, as improved from the licorn, borrowed from the Turks during the last century by the Russians, and from the latter by Europe generally.

Uniform (one form). In its military sense, means the particular dress and equipment assigned by proper authority to each grade of officers and men. The clothing consists of one prevailing color, variously ornamented and "faced" according to the rank and corps. *In full uniform*, wearing the whole of the prescribed uniform; not in undress.

Uniform Sword. An officer's sword of the regulation pattern prescribed for the army or navy.

Union. The national colors are called the *union*. When there is a blue field with white stripes, quartered in the angle of the American colors, that is, of the colors composed of red and white stripes, that blue field is called the *union*; and a small color of blue with white stars is called a *union-jack*.

United States Military Academy. See MILITARY ACADEMIES, and WEST POINT.

United States Sea-coast Fuze. See LABORATORY STORES.

United States, The. A Federal republic, composed of thirty-eight sovereign states and eleven territorial governments, occupying the temperate portion of North America. It is bounded on the north by British North America, east by New Brunswick and the Atlantic Ocean, south by the Gulf of Mexico and Mexico, and west by the Pacific Ocean. Its greatest length from the Atlantic to the Pacific, on the parallel of 42°, is 2768 miles, and its greatest breadth, from Point Isabel, Texas, to the northern boundary near Pembina, is 1601½ miles. The northern frontier is upward of 3850 miles in length, the Mexican 1500. The ocean coast, including the larger indentation, is estimated at 22,609 miles, of which 6861 are on the Atlantic, 8461 on the Gulf of Mexico, 2281 in California, 8000 on the coast of Alaska, and about 2000 on the Arctic Sea. This area has been obtained by successive annexations of territory, either by purchase, right of discovery, or conquest. In 1783, the territory ceded by Great Britain was confined to the country east of the Mississippi River, and north of Florida, having an area of 815,615 square miles. To this Louisiana was added by purchase from France in 1803; Florida, ceded by Spain, in 1821; Texas, annexed in 1845; Oregon, as settled by the treaty of 1846; California, etc., conquered from Mexico, 1847; New Mexico, etc., by treaty with Mexico, 1854; and Alaska, by purchase from

Russia, 1867. For full description of the States and Territories, and histories appertaining thereto, see the articles respectively.

Unkiar-Skelessi. A small town on the Asiatic shore of the Bosphorus, in the neighborhood of Scutari, gives its name to a treaty concluded between Turkey and Russia, July 8, 1838. This treaty, which consisted of six articles, was one of mutual defensive alliance; but a separate and secret article was subjoined, by which the sultan, in place of the military or naval aid which, by the first article of the treaty, he was bound to furnish to Russia, agreed to close the Strait of the Dardanelles, allowing no foreign vessels of war to enter it under any pretext whatever. In consequence of this treaty, Russia landed 15,000 men at Scutari, and stopped the victorious career of Ibrahim Pasha. The secret article was soon after divulged to Britain and France, both of whom regarded the treaty with dislike; and by the terms of that concluded at London, July 18, 1841, the stipulations of Unkiar-Skelessi were annulled.

Unload. To take the powder and ball out of a piece of ordnance or a musket.

Unmilitary. Contrary to rules of discipline; unworthy of a soldier.

Unsheathe. To draw from the sheath or scabbard, as a sword; hence, to unsheathe the sword, sometimes signifies to commence or make war.

Unshot. To remove the shot from, as a piece of ordnance; to take out the shot of.

Unslung. To take off the slings; to release from the slings; unslung knapsacks, etc.

Unspike. To remove a spike from, as from the vent of a cannon.

Untenable. Not to be held in possession; incapable of being defended.

Untrained. Not disciplined to exercise or manoeuvre.

Unvanquished. Not conquered or defeated.

Unwarlike. Not fit for or used to war.

Upbraid. Any officer or soldier who shall upbraid another for refusing a challenge, shall himself be punished as a challenger. See APPENDIX, ARTICLES OF WAR, 28.

Upon. Denoting assumption; as, he took the office of commander-in-chief upon him. Also, to incur responsibility; as, the general took everything upon himself.

Up-sar-o-ca. See ABSOROKAS.

Uruguay, or Banda Oriental del Uruguay. A republic of South America, bounded north and northeast by Brazil, east by the Atlantic, south by the Rio de la Plata, and west by the Uruguay. Banda Oriental was, during the Spanish rule, the name of that portion of the vice-royalty of Buenos Ayres which lay to the east of the river Uruguay, and comprehended the present Uruguay and the territory formerly known as the Seven Missions. When Buenos Ayres declared itself independent of Spain, Banda Oriental formed a part of the new republic. In 1821, however, it was taken possession of by Brazil, and united

with that state under the name of Provincia Cisplatina. By the treaty of 1828 between La Plata and Brazil, the southern and larger portion of Banda Oriental was formed into the republic of Uruguay. A civil war broke out in consequence of the invasion of the ex-president, Gen. Venancio Flores, June 26, 1863; Gen. Flores marched towards the capital in June; in February, 1865, Flores became provisional president. During an insurrection of the Blanco party (headed by Berro), at Montevideo, Gen. Flores was assassinated. The troops remained faithful. The insurrection was soon suppressed, and Berro shot, February 19, 1868.

Usages of War. See **WAR**.

Usbeks, or Usbeks. A people of Turkish race, who, at the close of the 15th century, invaded and conquered the numerous principalities into which Turkestan was at that time divided, and have ever since maintained dominion over the country. At the present day, they are for the most part a settled people, and are scattered over both Independent and Chinese Turkestan.

Usher of the Black Rod. See **BLACK ROD**.

Usher of the Green Rod. One of the officers of the order of the Thistle, whose duties consist in attendance on the sovereign and knights when assembled in chapter, and at other solemnities of the order. The rod from which the title is taken is of green enamel, 3 feet in length, ornamented with gold, having on the top a unicorn of silver, holding before him an escutcheon charged with the cross of St. Andrew.

Usipetes, or Usipii. A German people, who, being driven out of their abodes by the Suevi, crossed the Rhine and penetrated into Gaul; but they were defeated by Cæsar, and compelled to recross the river. They were now received by the Sygambri, and allowed to dwell on the northern bank of the Lippe; but we afterwards find them south of the Lippe; still later they became lost under the general name of Alemanni.

Utah. A Territory of the United States, which is bounded on the north by Idaho and Wyoming, east by Colorado, south by Arizona, and west by Nevada. Utah is an immense basin, from 4000 to 6000 feet above the level of the sea, surrounded by mountains, which at some points reach the altitude of 8000 to 18,000 feet. Utah was acquired by the United States from Mexico by the treaty of 1848, and was erected into a Territory in 1850. There have been serious difficulties between the U. S. government and the Mormons, who first arrived in the Great Salt Lake Valley in 1847. A terrible massacre of settlers took place at Mountain Meadows, Utah, by Indians, who it is said were instigated to commit the terrible atrocity by the Mormons. In order to put an end to all the disturbances in Utah, the President dispatched, in 1857, an expedition against Brigham Young, who was treated as an open rebel. Owing to the inclemency

of the weather and other causes, the expedition did not arrive in Utah until May, 1858, when the governor, Cumming, reported to the President that Brigham Young had given up all hopes of resistance. The Territory has remained quiet ever since.

Utahs, or Utes. A tribe of North American Indians, who inhabit Utah, Nevada, part of Colorado, and New Mexico. They are at present peaceable, but do not engage in agriculture. See **INDIANS AND THEIR AGENCIES**.

Utensil. That which is used; an implement; an instrument; especially, an instrument or vessel used in a kitchen, or in domestic use. Utensils for camp and garrison are styled camp and garrison equipage, and are furnished by the quartermaster's department.

Utica (ruins at Bow-Shater). The greatest city of ancient Africa, supposed to be older than Carthage. Like others of the very ancient Phœnician colonies in the territory of Carthage, Utica maintained a comparative independence, even during the height of the Punic power, and was rather the ally of Carthage than her subject. It stood on the shore of the northern part of the Carthaginian Gulf, a little west of the mouth of the Bagradas, and 27 Roman miles northwest of Carthage; but its site is now inland in consequence of the changes effected by the Bagradas in the coast-line. In the third Punic war, Utica took part with the Romans against Carthage, and was rewarded with the greatest part of the Carthaginian territory. It afterwards became renowned to all future time as the scene of the last stand made by the Pompeian party against Cæsar, and of the glorious, though mistaken, self-sacrifice of the younger Cato. It fell into the hands of the Vandals in 489; but its final destruction is due to the Saracens, who twice captured the town.

Utrecht (the Roman *Trajectum ad Rhenum*). A town of Holland, capital of a province of the same name, on the old Rhine. The union of the Seven United Provinces began here in 1579. The treaty of Utrecht, which terminated the wars of Queen Anne, was signed by the ministers of Great Britain and France, and all the other allies, except the ministers of the empire, April 11, 1713. This treaty secured the Protestant succession in England, the separation of the French and Spanish crowns, the destruction of Dunkirk, the enlargement of the British colonies and plantations in America, and a full satisfaction for the claims of the allies. Utrecht surrendered to the Prussians May 9, 1787; was acquired by the French January 18, 1795, and restored at the peace.

Uxii. A warlike people, of predatory habits, who had their strongholds in Mount Parachoathras, on the northern border of Persia, in the district called Uxia, but who also extended over a considerable tract of country in Media.

V.

Vacancy. The state of an office or commission to which no one is appointed.

Vacant Companies. Companies to the permanent command of which no person is appointed for the time being.

Vacate. To annul; to make void; to deprive of force; to make of no authority or validity; as, to vacate a commission.

Vacca, Vaga, or Vaba (now *Beja*). A city of Zeugitana, in Northern Africa, on the borders of Numidia, a good day's journey south of Utica. It was destroyed by Metellus in the Jugurthine war, but was restored and colonized by the Romans. Its fortifications were renewed by Justinian, who named it Theodorias, in honor of his wife.

Vadimonis Lacus (now *Lago di Bassano*). A small lake of Etruria. It is celebrated in history for the defeat of the Etruscans in two great battles, first by the dictator Papirius Cursor in 309 B.C., from the effects of which the Etruscans never recovered; and again in 288, when the allied forces of the Etruscans and Gauls were routed by the consul Cornelius Dolabella.

Værfvade. The standing army of Sweden, recruited by voluntary enlistment. They receive pay, and serve from three to six years. They form the foot- and horse-guards, the artillery and engineers.

Vair. In heraldry, tinctures are either of metal, color strictly so called, or fur. The furs were originally but two,—ermine and vair. Vair is said to have been taken from the fur of a squirrel, bluish-gray on the back, and white on the belly, is expressed by blue and white shields, or bells in horizontal rows, the bases of the white resting on the bases of the blue. If the vair is of any other colors than white and blue, they must be specified. Various modifications of these furs were afterwards introduced, among others: *counter-vair*, or vair with the bells of one tincture placed base to base, and *potent counter-potent*, vair with crutch-shaped figures instead of bells.

Vaivode (*Fr.*). An old Slavonian word, which signifies prince or general. This title was formerly given to the sovereign princes of Wallachia, Moldavia, and Transylvania.

Valais (*Ger. Wallis*). A frontier canton of Switzerland, bounded on the north by the cantons of Vaud and Bern, and on the south by Italy. At the period of the struggle of the Swiss with the Duke of Burgundy, the Upper Valais took possession of the Lower Valais, and reduced it to the position of a vassal state; and in this condi-

tion it remained until 1798, the period of the French conquest, when the distinction was set aside.

Valdivia. A town of Chili, capital of the province of the same name, on the river Valdivia, or Calle, 210 miles south from Concepcion. It was founded in 1551 by the conqueror Pedro de Valdivia. In 1590 it was taken and plundered by the Araucanians, the native inhabitants of the country.

Valencia (anc. *Valentia*). An ancient city of Spain, capital of the ancient kingdom and modern province of the same name, on the Turia, about 2 miles from the sea, and 190 miles east-southeast from Madrid. Valencia is a very ancient city. It was destroyed by Pompey, and rebuilt by Sertorius. It was taken by the Goths in 418, from whom it was captured by the Moors in 714. From the Moorish sway it was rescued in 1094 by the Cid, from whom it is sometimes called *Valentia del Cid*. The Moors once more got possession of it in 1101, but were compelled finally to relinquish it in 1238. It was taken by the Earl of Peterborough in 1705, but submitted to the Bourbons after the unfortunate battle of Almanza, in 1707. It resisted the attempts made on it by Marshal Mincey, but was taken from the Spaniards with a garrison of more than 16,000 men, and immense stores, by the French under Suchet, January 9, 1812; and held by them till 1813.

Valenciennes. A fortified town of France, in the department of the North, 27 miles southeast from Lille, at the confluence of the Rhonelle and the Scheldt. The town is defended by a citadel constructed by Vauban. The city was besieged from May 28 to July 28, 1793, when the French garrison surrendered to the allied English and Austrian armies, under the Duke of York. It was retaken by the French, August 27–30, 1794; on capitulation, the garrison and 1100 emigrants were made prisoners, with immense stores.

Valenciennes. See LABORATORY STORES.

Valenza (anc. *Valentia Valentium Forum*). A city of Northern Italy, on an elevated plain on the right bank of the Po, 8 miles north of Alessandria. It is a very ancient town, belonged to the Liguri, and was conquered by Marcus Fulvius, the proconsul. In 1685 it was besieged for fifty days by the armies of France, Savoy, and Parma, and taken. In 1707 it came into the possession of Victor Amadeus II., Duke of Savoy; in 1805 the French destroyed its gates and fortifications; and in 1815, after the fall of Napoleon's empire, it reverted to the king of Sardinia.

Valetta, or La Valetta. An important city and capital of the island of Malta, on the northeast side of which it is situated. The town and harbors are defended by a series of fortifications of great strength. They are mostly hewn out of the solid rock, and, mounted with the most powerful artillery, are considered impregnable. The city was founded by La Valette, grand master of the Knights of St. John, in 1566. Its history is identical with that of Malta (which see).

Valetudinarium. An infirmary or hospital for the sick. Among the Romans, *valetudinarium*, or hospital, was only established in time of war, when their armies marched beyond the boundaries of the republic.

Valiant. Personally brave, fearless of danger in war, etc.

Valladolid. A famous city of Spain, capital of the province of the same name, on the left bank of the Pisuerga, 150 miles northwest from Madrid. It is the Roman *Pincia* and the Moorish *Belad Walid*; was recovered for the Christians by Ordogno II., the first king of Leon, 914-23. It was captured from the French by the English, June 4, 1813.

Vallary Crown. A crown bestowed by the ancient Romans as an honorary reward on the soldier who first surmounted the outworks, and broke into the enemy's camp. It is in form a circle of gold with palisades attached. The crown vallary occasionally occurs as a heraldic bearing.

Valls. A town of Spain, in the province of Tarragona, 9 miles north from Tarragona. The French here defeated the Spaniards in 1809, and afterwards sacked the town; but they suffered a defeat themselves near the same place, in 1811, by some Spanish troops under Sarsfield.

Vallum. Among the Romans, the parapet which fortified their encampments. It consisted of two parts,—the *agger* and the *sudes*; the *agger* was the earth thrown up from the vallum, and the *sudes* were a sort of wooden stakes to secure and strengthen it. *Vallus* was the name of the stake which served as a palisade in the Roman intrenchment. Every soldier carried one of these *valli*, and on some occasions three or four bound together like a fagot.

Valmy. A village of France, department of Marne, 20 miles northeast from Chalons. This village is celebrated as the place where the republican armies of France under Kellerman, in 1792, defeated for the first time the allied armies under the Duke of Brunswick.

Valor. Strength of mind in regard to danger; that quality which enables a man to encounter danger with firmness; personal bravery; warlike courage; intrepidity; bravery.

Valparaiso. The principal seaport of Chili, South America, on the bay of the same name, about 80 miles west-northwest of Santiago. The bay is sheltered from all quarters except the north; and is defended

by three forts and a water-battery. Valparaiso was bombarded by the Spanish fleet, March 31, 1866. Few lives were lost, but buildings and other property, the value of which was estimated at from \$9,000,000 to \$20,000,000, were destroyed.

Valtelline, or Valtellina (Northern Italy). A district near the Rhetian Alps, seized by the Grison league in 1512, and ceded to it in 1530. At the instigation of Spain, the Catholics rose and massacred the Protestants, July 19-21, 1620. After much contention between the French and Austrians, the neutrality of the Valtelline was assured in 1639. It was annexed to the Cisalpine republic in 1797; to Italy, 1807; to Austria, 1814; to Italy, 1860.

Vambrace. In ancient armor, the piece designed to protect the arm below the elbow.

Vambraced (Fr. *avant-bras*, "fore-arm.") A term applied to an arm clothed in armor, as in the subjoined crest; a dexter embowed arm vambraced proper, the gauntlet holding a sword below the hilt in bend sinister, point downwards, argent, hilt and pommel or.

Vamplate. A round piece of iron on a tilting-spear, used to protect the hand.

Van. The front of an army, the first line, or leading column.

Vancouver's Island. Now, jointly with British Columbia, one of the colonies of Great Britain, forms a part of British North America. Settlements were made here by the English in 1781, which were seized by the Spaniards in 1789, but restored. By a treaty between the British government and that of the United States in 1846, this island was secured to the former.

Vandals (*Vandalii*, or *Vindalii*). A confederacy of German nations, probably of the great Suevic race, to which the Burgundiones, Gothones, Gepide, and Rugii belonged. They dwelt originally on the northern coast of Germany, but were afterward settled north of the Marcomanni, in the *Reisengebirge*, which are hence called *Vandalici Montes*. They subsequently appear for a short time in Dacia and Pannonia; but at the beginning of the 5th century (409) they traversed Germany and Gaul, and invaded Spain. In this country they subjugated the Alani, and founded a powerful kingdom, the name of which is still preserved in Andalusia (*Vandalusia*). In 429 they crossed over into Africa, under their king Genseric, and conquered all the Roman dominions in that country. Genseric subsequently invaded Italy, and took and plundered Rome in 455. The Vandals continued masters of Africa till 535, when their kingdom was destroyed by Belisarius, and annexed to the Byzantine empire.

Van-foss. In fortification, a ditch dug without the counterscarp, and running all along the glacis, usually full of water.

Vanguard. That part of the army which marches in front.

Vanquish. To conquer; to overcome; to subdue in battle, as an enemy.

Vant-bras. Armor for the arm.

Variation of the Needle. Is the angle included between the true and magnetic meridians of a place; the deviation of a magnetic needle from the true north or south points of the horizon;—called also *declination of the needle*.

Varna. An important fortified seaport of European Turkey, in Bulgaria, on the northern side of a semicircular bay, an inlet of the Black Sea, 180 miles north-northwest from Constantinople. A great battle was fought near this place, November 10, 1444, between the Turks under Amurath II. and the Hungarians under their king Ladislaus, and John Hunniades. The latter were defeated with great slaughter; the king was killed, and Hunniades made prisoner. The Christians had previously broken the truce for ten years, recently made at Szegedin. The emperor Nicholas of Russia arrived before Varna, the headquarters of his army, then besieging the place, August 5, 1828. The Turkish garrison made a vigorous attack on the besiegers, August 7, and another on August 21, but were repulsed. Varna surrendered, after a sanguinary conflict, to the Russian arms, October 11, 1828. It was restored at the peace in 1829; its fortifications were dismantled, but have since been restored. The allied armies disembarked at Varna, May 29, 1854, and remained there till they sailed for the Crimea, September 8, following. While at Varna they suffered severely from cholera.

Varveled. In heraldry, when the leather thongs which tie on the bells to the legs of hawks are borne floatant with rings at the end, the bearing is termed *jessed, belled, and varveled*.

Vascones. A powerful people on the northern coast of Hispania Tarraconensis, between the Iberus and the Pyrenees, in the modern Navarre and Guipuzco. Their chief towns were Pompelon and Calagurris. They were a brave people, and fought in battle bare-headed. Under the empire they were regarded as skillful diviners and prophets. Their name is still retained in that of the modern Basques.

Vassy. A town of France, in the department of the Upper Marne, 29 miles northwest from Chaumont. The massacre of the Protestants at this place by the Duke of Guise on March 1, 1562, led to the civil wars which desolated France to the end of the century.

Vaud. A canton which forms the western corner of Switzerland between the Jura and the Bernese Alps. After having been successively held by the Franks, kings of Burgundy, emperors of Germany, dukes of Zähringen, and dukes of Savoy, it was conquered by the Bernese, January, 1536, and annexed, 1554. Vaud was made independent in 1798, and joined the Confederation in 1815.

Vaunt-mure. In fortification, a false wall; a work raised in front of the main

wall. This word is written also *vaimure* and *vamure*.

Vectis, or Vecta (now *Isle of Wight*). An island off the southern coast of Britain. It was conquered by Vespasian in the reign of Claudius.

Vedettes, or Videttes. Mounted sentinels stationed at the outposts of an army or encampment, and so posted at all the avenues and rising grounds, that they can best observe the approach of an enemy, and communicate by signal to their respective posts, as well as with each other, when any danger is to be apprehended.

Veii (now *Isola Farnese*). One of the most ancient and powerful cities of Etruria, situated on the river Crimera, about 12 miles from Rome. It possessed a strongly-fortified citadel, built on a hill rising precipitously from the deep glens which bound it, save at the single point where a narrow ridge unites it to the city. The Veientes were engaged in almost unceasing hostilities with Rome for more than three centuries and a half, and we have records of fourteen distinct wars between the two nations. Veii was at last taken by the dictator Camillus, after a siege of ten years, 396 B.C. The city fell into his hands, according to the common story, by means of a *cuniculus*, or mine, which was carried by Camillus from the Roman camp under the city into the citadel of Veii. The citizens were massacred or sold as slaves, and the land confiscated.

Vekilchares. A word used among the Turks, which signifies the same as *fourrier* in the French and corresponds with quartermaster.

Veles-Malaga. A fortified town in the south of Spain, in the province of Malaga, 16 miles east from the city of that name. The town was taken from the Moors, by Ferdinand and the Catholic, after a long siege.

Velish. A town of Russia in Europe, in the government of Vitepsk, situated on the Dwina. This place, which was founded by the Russians in 1586, was taken by the Poles in 1580, but in 1772 it again reverted to Russia.

Velites. In the Roman armies, the name of the light-armed troops, who were first instituted during the second Punic war, and were remarkable for their agility.

Velletri (anc. *Velitræ*). A town of the Papal States, in the Comarca, and 21 miles southeast from Rome. The ancient *Velitræ* was an important Volscian city destroyed by the Romans, but afterwards rebuilt. In 1784, Carlo Borbone, king of Naples, gained, near Velletri, a decisive victory over the Austrians, which secured the kingdom of the two Sicilies to the Spanish Bourbons.

Vellore. A town and fortress of British India, in the presidency of Madras, situated on the river Palar, 80 miles southwest from Madras. It is very strongly fortified. After the capture of Seringapatam, in 1799, Vellore was fixed on for the place of confinement or residence of the family of Tippoo

Sahib. In July, 1806, a very serious mutiny took place among the garrison, composed principally of native troops. It was speedily suppressed by the gallant conduct of Col. Gillespie of the 19th Dragoons.

Velocimeter. An instrument for obtaining initial velocity, invented by Col. Benton, U. S. Ordnance Department. See CHRONOSCOPE.

Velocity. Is rate of motion; the relation of motion to time, measured by the number of units of space passed over by the moving body in a unit of time, usually the number of feet in a second. The velocity of a projectile, at any point of its flight, is the space in feet passed over in a second of time, with a continuous, uniform motion. *Initial velocity* is the velocity at the muzzle of the piece; *remaining velocity* is the velocity at any point of the flight; *terminal velocity* is the velocity with which it strikes its object; and *final velocity* of descent in air, is the uniform velocity with which a projectile moves, when the resistance of the air becomes equal to the accelerating force of gravity. The initial velocity of a projectile may be determined by the principles of mechanics which govern the action of the powder, the resistance of the projectile, etc., or by direct experiment.

The instant that the charge of a fire-arm is converted into gas, it exerts an expansive effort which acts to drive the projectile out of the bore. If the gaseous mass be divided into elementary sections perpendicular to its length, it will be seen that, in their efforts to expand, each section has not only to overcome its own inertia, but the inertia of the piece and projectile, as well as the inertia of the sections which precede it. The tension of each section, therefore, increases from the extremities of the charge to some intermediate point where it is a maximum. The pressure on all sides of the section of maximum density being equal, it will remain at rest, while all the others will move in opposite directions, constantly pressing against the projectile and piece, and accelerating their velocities. As the projectile moves in the bore, the space in which the gases expand is increased, while their density is diminished; it follows that the force which sets a projectile in motion in a fire-arm varies from several causes: (1st) It varies as the space behind the projectile increases, or as the velocity regarded as a function of the time; (2d) It varies throughout the column of gas for the same instant of time; and (3d) It varies from the increasing quantities of gas developed in the successive instants of the combustion of the powder. See INITIAL VELOCITY.

The motion of a body falling through the air will be accelerated by its weight, and retarded by the buoyant effort of the air, and the resistance which the air offers to motion. As the resistance of the air increases more rapidly than the velocity, it follows that there is a point where the re-

tarding and accelerating forces will be equal, and that beyond this the body will move with a uniform velocity, equal to that which it had acquired down to this point. The buoyant effort of the air is equal to the weight of the volume displaced, or $P \frac{d}{D}$; in which P is the weight and D the density of the projectile, and d the density of the air. When the projectile meets with a resistance equal to its weight, we shall have,

$$P \left(1 - \frac{d}{D}\right) = A_p R^2 v^2 \left(1 + \frac{v}{r}\right); \quad (15)$$

in which the weight of the displaced air is transferred to the first member of the equation. As the density of the air is very slight compared to that of lead or iron, the materials of which projectiles are made, $\frac{d}{D}$ may be neglected. Making this change, and substituting for P , $\frac{4}{3} R^3 D$, the expression for the *final velocity* reduces to

$$v^2 \left(1 + \frac{v}{r}\right) = \frac{4 R D}{3 A}. \quad (16)$$

The resistance on the entire projectile for a velocity of 1 foot, is $A_p R^2$; dividing this by $\frac{P}{g}$, or the mass, we get the resistance on a unit of mass. Calling this $\frac{1}{2c}$ we have,

$$\frac{1}{2c} = \frac{A_p R^2}{P}, \text{ or } 2gc = \frac{P}{A_p R^2}.$$

Substituting for P its value in the equation of vertical descent, we have,

$$2gc = v^2 \left(1 + \frac{v}{r}\right);$$

from which we see that c depends only on v ; but

$$c = \frac{2 R D}{3 g A} \quad (17)$$

hence, the *final velocity* of a projectile falling through the air is directly proportional to the product of its diameter and density, and inversely proportional to the density of the air, which is a factor of A . The expression for the value of c shows that the retarding effect of the air is less on the larger and denser projectiles. To adapt it to an oblong projectile of the pointed form, the value of D should be increased (inasmuch as its weight is increased in proportion to its cross-section), while that of A should be diminished. It follows, therefore, that for the same caliber an oblong projectile will be less retarded by the air than one of spherical form, and consequently with an equal and perhaps less initial velocity, its range will be greater.

Velocity of Light. See LIGHT, VELOCITY OF.

Velocity of Sound. See **SOUND**.

Vendée, La. A department in the west of France. The wars of *La Vendée* denote the armed opposition to the religious and political changes in France, which burst out into a species of partisan warfare in 1793, 1794, 1795, 1799, and 1815.

Venezuela. A republic in the northwest of South America. The east coast of Venezuela was discovered by Columbus in 1498; Ojeda and Vespucci followed in 1499. The first settlement was made at Cumana in 1520, by the Spaniards; and Venezuela remained subject to Spain till it claimed independence in 1811. In 1812, it returned to allegiance to Spain, but again revolted in 1813, and, forming with New Granada and Ecuador the republic of Colombia, it was declared independent in 1819. In 1831, the states separated. During the ten years from 1861-1871, upwards of 60,000 persons were killed in the civil wars. The revolution triumphed, and Guzman Blanco attempted to establish a government at Caraccas, which was captured by revolutionists, April, 1870.

Venice. A fortified city of Northern Italy, one of the noblest, most famous, and singular cities in the world, is built upon a crowded cluster of islets, in the lagoon of the same name, on the northwest fringe of the Adriatic Sea, 23 miles east of Padua. It was founded by families from Aquileia and Padua fleeing from Attila, about 452. Under their third doge (720-787) the Venetians entered upon that career of enterprise in which their prudence and valor were almost always conspicuous, and which they continued to pursue to the last. Venice after a series of enterprises which covered a period of 700 years, and in which she was nearly always successful, gaining territory and prestige, entered into a war with the Turks in 1461, which lasted until 1477, and in which she lost many of her Eastern possessions. The Venetians took Cyprus in 1475, and helped to overcome Charles VIII. of France in 1495; they excited the Turks against Charles V. in 1504, and were nearly ruined by the league of Cambray in 1508. They also assisted in defeating the Turks at Lepanto in 1571, but lost Cyprus to the Turks in the same year. The Venetians gained several important naval victories over the Turks at Scho in 1651, and in the Dardanelles in 1655, but lost Candia, one of their possessions, in 1669; recovered part of the Morea in 1683-99, but lost it again in 1715-39. Venice was occupied by Bonaparte in 1797, who, by the treaty of Campo Formio, gave part of its territory to Austria, and annexed the remainder to the Cisalpine republic. In 1805 the whole of Venice was annexed to the kingdom of Italy by the treaty of Presburg; but was transferred to the empire of Austria in 1814, and the city declared a free port in 1830. An insurrection began in Venice on March 22, 1848, and the city, which was defended by Daniele

Manin, surrendered to the Austrians after a long siege on August 22, 1849. It was transferred to Italy, October 17, 1866, by the treaty of Vienna.

Venlo. A small but strongly fortified town in the Netherlands, province of Limburg, situated on the right bank of the Maas, 45 miles north-northeast from Maastricht. Venlo was walled by Duke Reynold of Gelder in 1848. It has many a time felt the horrors of a siege, and has been taken and retaken, the last time by the Belgians in 1880, in whose hands it remained till the conference of London, June 22, 1839, when it returned to the Dutch.

Vennones. A people of Rhaetia, and, according to Strabo, the most savage of the Rhaetian tribes, inhabiting the Alps near the sources of the Athesis.

Vent. In gunnery, is the aperture through which fire is communicated to the charge. It should be as small as the use of the priming-wire and tube will allow. See **ORDNANCE, CONSTRUCTION OF, INTERIOR FORM OF CANNON**.

Ventail. That part of a helmet which is made to lift up.

Vent-gauges. See **INSPECTION OF CANNON**.

Vent-piece. In some ordnance is a piece of copper containing the vent, and screwed in at the proper position.

Vent-punch. See **IMPLEMENTS, EQUIPMENTS AND MACHINES**.

Vent-searcher. See **INSPECTION OF CANNON**.

Vera Cruz. An ancient city on the east coast of Mexico, about 185 miles east of the city of Mexico. The castle of Ulloa and the city were bombarded and taken by the Americans in 1847, and the city was taken by the allies, December 17, 1861. Vera Cruz was retaken by the liberals, under Juarez, June 27, 1867.

Verat (Fr.). A 12-pounder gun of 17 calibers, weighing 2300 pounds, having a charge of 8 pounds.

Verbal Orders. Instructions given by word of mouth, which, when communicated through an official channel, are to be considered as equally binding with written ones.

Vercelli (anc. *Verellæ*). A town of the kingdom of Sardinia, capital of a province of the same name. Near this place Varus defeated the Cimbri, 101 B.C. It was the seat of a republic in the 18th and 14th centuries. It was taken by the Spaniards in 1680; by the French in 1704; and allies, 1706; it subsequently partook of the fortunes of Piedmont.

Verden. A town in Hanover, Germany, on the right bank of the Aller. Here Charlemagne massacred about 4500 Saxons, who had rebelled and relapsed into idolatry, 782.

Verdict. See **FINDING**.

Verdoy. In heraldry, a term indicating that a bordure is charged with flowers, leaves, or vegetable charges. Thus a bordure argent verdoy of oak-leaves proper, is

equivalent to a bordure argent charged with eight oak-leaves proper.

Verdun (anc. *Verodunum*). A fortified town of France in the department of Meuse, on the right bank of the river of that name, about 150 miles (direct line) east-northeast from Paris. It was fortified by Vauban, and its defenses consist of a wall with bastions and a citadel. It was acquired by the Franks in the 6th century, and formed part of the dominions of Lothaire by the treaty of Verdun, 843, when the empire was divided between the sons of Louis I. It was taken and annexed to the empire of Otho I. about 939. It surrendered to France in 1552, and was formally ceded in 1648. It was taken and held by the Prussians forty-three days, September–October, 1792. Gen. Beaurepaire, the commandant, committed suicide before the surrender, and fourteen ladies were executed in 1794, for going to the king of Prussia to solicit his clemency for the town. Verdun surrendered to the Germans, November 8, 1870, after a brave defense, two vigorous sallies being made October 28. Above 4000 men and 108 cannon were captured, and much arms and ammunition.

Vere, de. The name of an ancient and noble family of England, descended from a Norman knight who had a high command at the battle of Hastings. His son became earl of Oxford, and minister of Henry I. The third earl was one of the barons who extorted the Magna Charta from King John. John de Vere, seventh earl, was a famous commander, and fought at Crécy and Poitiers (1356). The thirteenth earl was a leader of the Lancastrian party in the war of the Roses, and commanded the van of the army of Henry VII. at Bosworth (1485). The twentieth earl was Aubrey de Vere, who fought for Charles I. in the civil war, and after the restoration became lord-lieutenant of Essex.

Vergette (*Fr.*). In heraldry, a pallet or small pale; hence, a shield divided by pallets or pales.

Vermeuil. A town of France, in the department of the Eure, situated on the Arve. It was the scene of a battle between the Burgundians and English, under the Duke of Bedford, and the French, assisted by the Scots, commanded by the Count de Narbonne and the Earls of Douglas and Buchan, etc. The French at first were successful; but some Lombard auxiliaries, who had taken the English camp, commenced pillaging. Two thousand English archers then came fresh to the attack; and the French and Scots were totally defeated, and their leaders killed.

Vermont. One of the United States of America, and one of the five New England States; it was the first State received after the adoption of the Federal Constitution. Vermont is bounded on the north by Canada, on the east by the Connecticut River, which separates it from New Hampshire, on

the south by Massachusetts, and on the west by New York, from which it is separated for 100 miles by Lake Champlain. The first settlement made in this State was in 1724, when it was claimed as a part of the New Hampshire grants. In 1763, it was claimed by New York, under grants of Charles II. to the Duke of York. For ten years the New York officers were resisted, and sometimes tied to trees and whipped by the lawless settlers. These contests were stopped by the Revolution, but this State, a refuge for settlers from the other States, remained eight years out of the Union. It was chiefly the Vermont militia that gained the victory of Plattsburg, on Lake Champlain, in 1812; and the Green Mountain State contributed largely to the Union forces in the war of the Rebellion.

Verolanium, or Verulamium (now *Old Verulam*, near St. Alban's). The chief town of the Catuallani in Britain, probably the residence of the king Cassivellaunus, which was conquered by Caesar. It was subsequently made a Roman *municipium*. It was destroyed by the Britons under Boadicea, in their insurrection against the Romans, but was rebuilt, and continued to be an important place.

Verona. An ancient city of Northern Italy, in Venetia, 72 miles west of Venice by railway. Verona is a fortress of the first rank, a member of the famous Quadrilateral (which see), and has always been considered a place of strength since it was surrounded with walls by the emperor Gallienus, 265. Its modern fortifications are among the most extraordinary works of military engineering in Europe. After passing into the hands of the Austrians, in 1815, it was greatly strengthened; and since 1849 every effort has been made to render it impregnable. The early history of Verona is involved in obscurity. It fell into the hands of the Romans, and under the empire became one of the most flourishing cities in the north of Italy. Constantine took it by assault in 312; Stilicho defeated the Goths here in 402; and on September 27, 489, Theodoric defeated Odoacer, king of Italy. Charlemagne took it in 774, and made it the royal residence of his son, King Pepin. In 1405 the city gave itself over to Venice, in order to free itself from its tyrants, who were alternately of the Scala, the Visconti, or the Carrara families. It was held by Venice till its capture by the French general Masséna, June 8, 1796. Near here Charles Albert of Sardinia defeated the Austrians, May 6, 1848. It was surrendered to the Italian government, October 16, 1866.

Versailles. A celebrated city of France, and long the residence of the French court, capital of the department of Seine-et-Oise, 11 miles southwest from Paris. Here was signed the treaty (September 8, 1783), at which England recognized the independence of the United States of America. On the same day a treaty was signed here between

Great Britain, France, and Spain, by which Pondicherry and Carical, with other possessions in Bengal, were restored to France, and Trincomalee restored to the Dutch. Here was held the military festival of the royal guards, October 1, 1789, which was immediately followed (on the 5th and 6th) by the attack of the mob, who massacred the guards and brought the king back to Paris. Versailles, with the troops there, surrendered to the Germans September 19, 1870, and the crown-prince of Prussia entered the next day. On September 26, he awarded the iron cross to above thirty soldiers at the foot of the statue of Louis XIV. The palace was converted into a hospital. The royal headquarters were removed here from Ferrières, October 5.

Vert. In heraldry, coats of arms are distinguished from one another not only by the charges or objects borne on them, but by the color of these charges, and of the field on which they are placed. *Vert* (green) is indicated in uncolored heraldic engravings by diagonal lines from dexter chief to sinister base.

Vertical Fire. See FIRE, VERTICAL.

Vervels, or Varvels. Small rings attached to the ends of the jesses of a hawk, through which a string was passed to fasten them to its leg. They occur as a heraldic charge.

Vervins. A town of France, in the department of the Aisne, 23 miles northeast from Laon. A treaty of peace was concluded here in 1598 between Philip II. of Spain and Henry IV. of France.

Veseronce. In Southeast France, near Vienne. Here Gondemar, king of the Burgundians, defeated and killed Clodomir, king of Orleans, and revenged the murder of his brother Sigismond and his family, 524. This conflict is also called the battle of Voiron.

Vespers, Sicilian. See SICILIAN VESPER.

Vestini. A Sabellian people in Central Italy, lying between the Apennines and the Adriatic Sea. They are mentioned in connection with the Marsi, Marrucini, and Peligni; but they subsequently separated from these tribes, and joined the Samnites in their war against Rome. They were conquered by the Romans, 828 B.C., and from this time appear as the allies of Rome. They joined the other allies in the Marsic war, and were conquered by Pompeius Strabo in 89.

Veteran. Long exercised in anything, especially in military life and the duties of a soldier; long practiced or experienced; as, a veteran officer or soldier.

Veteran. One who has been long exercised in any service or art, particularly in war; one who has grown old in service, and has had much experience.

Veteran Corps. Are among the military reserves of all nations. They consist of old soldiers past the prime of active manhood, and incapable of taking the field. Their

discipline and steadiness, however, admirably fit them for garrisons or fortresses, and for the instruction of young troops. During the civil war in America (1861-65), a veteran reserve corps was established under the command of the provost-marshal-general. The men admitted into this corps were drawn from three sources, viz.: (1) By taking officers and men still in the field, who had been disabled by wounds or by disease contracted in the line of duty; (2) By taking officers and men who were absent sick in hospitals or convalescent camps; and (3) By accepting officers and men who had been honorably discharged on account of wounds or disease contracted in the line of duty, and who desired to re-enter the service. This corps was divided into companies, battalions, and regiments, and was employed to enforce the enrolling and drafting of men for active service, for arresting deserters, stragglers, etc., and as a garrison for permanent barracks, etc. Upon the reduction of the army in 1869, the corps was discontinued.

Veterinary. Of or pertaining to the art of healing or treating the diseases of domestic animals, as horses, etc. In England and some other European countries, a veterinary surgeon is a commissioned officer, who has medical charge of horses used in the military service. In the U. S. service there is one veterinary surgeon allowed to each of the regiments of cavalry, and the 7th, 8th, 9th, and 10th regiments of cavalry have an additional veterinary surgeon. These veterinary surgeons are recognized as civilians.

Vetterlin Rifle. See SMALL-ARMS.

Vexilla. Flags or streamers, given to the Roman soldiers who distinguished themselves. They were embroidered in silk, and fixed on the top of a spear. *Vexillum roscum* was a red flag, which the general, on any sudden tumult or unforeseen danger, brought out of the Capitol, and encouraged the people to flock to it as recruits for infantry.

Viazma. A town of European Russia, on the river of the same name, in the government and 100 miles east-northeast from Smolensk. The French were defeated here by the Russians, October 22, 1812, when a great part of the town was destroyed by fire.

Vibo (now Bivona). The Roman form of the Greek town Hipponium, situated on the southwestern coast of Bruttium. It was destroyed by the elder Dionysius, who transplanted its inhabitants to Syracuse. It was afterwards destroyed, and at a later time it fell into the hands of the Bruttii by the Romans, who colonized it 194 B.C., and called it Vibo Valentia.

Vicenza. A city of Northern Italy, in the province of Venice, 39 miles west from Venice. Vicenza was a Roman station, and suffered greatly on the irruption of the northern tribes. It was successively pillaged by Alaric, Attila, the Lombards, and the

emperor Frederick II. In the early part of the 15th century it came into the possession of the Venetians, who held it till 1796, when it became the scene of sanguinary conflicts between the French and Austrians.

Vicksburg. A city and port of Mississippi, on the Mississippi River, 408 miles north of New Orleans, and is the chief town between Memphis and New Orleans. It was strongly fortified in 1861, and provided with a large garrison. In January, 1862, it was attacked by the Federal naval forces from Memphis and New Orleans, but without success. In April, 1863, a naval attack was combined with the land forces under Gen. Grant, who defeated Gen. Pemberton near Jackson, cut off supplies and reinforcements from the garrison, and with a close siege and continual assaults, compelled a surrender, July 4, 1863, with 30,000 prisoners of war, 200 cannon, and 70,000 stand of arms.

Victor. The winner in a contest; one who gets the better of another in any struggle; especially, one who conquers in war; a vanquisher; one who defeats an enemy in battle.

Victoria Cross. The peculiarities of this decoration, which was instituted on the termination of the Crimean campaign in 1856, are, that it may be granted to a soldier of any rank, and for a single act of valor. The Cross of the Legion of Honor, as was felt during the Crimean campaign, served a purpose in the French army which was served by none of the British decorations, and it was in imitation of it that the Victoria Cross was founded, with the inscription "For Valor," and which can be given to none but those who have performed, in presence of the enemy, some signal act of valor or devotion to their country. The general distribution of the crosses earned in the Crimean war took place in Hyde Park on June 26, 1857. The recipients were 62 in number. The Victoria Cross is in the form of a Maltese cross, formed from the cannon captured at Sebastopol. In the centre is the royal crown, surmounted by the lion, and below, on a scroll, the words, "For Valor." The ribbon is blue for the navy, and red for the army. On the clasp are two branches of laurel, and from it the cross hangs, supported by the initial "V." The decoration is accompanied by a pension of £10 a year.

Victorious. Belonging or relating to victory, or a victor; having conquered in battle or contest; having overcome an enemy; conquering; winning; triumphant; as, a victorious general; victorious troops; victorious army. Producing conquest; as, a victorious day. Emblematic of conquest, indicating victory. "Brows bound with victorious wreaths."

Victory. The defeat of an enemy in battle, or of an antagonist in contest; a gaining of the superiority in war, struggle, or combat; conquest; triumph.

Victuals. Food or sustenance allowed to the troops, under certain regulations, whether

on shore or embarked in transports. Relieving the enemy with money, victuals, etc., is punishable by court-martial. See APPENDIX, ARTICLES OF WAR, 45.

Vienna. A celebrated city of Europe, capital of the Austrian empire, is situated about 2 miles from the main stream of the Danube, 251 miles southeast of Prague by railway. Vienna was the Roman *Vindobona*. On the decline of the Roman empire it experienced the common fate, and was pillaged by the Goths and Huns. In the 18th century Vienna was subjected to a six weeks' siege, in consequence of the refusal of Ottokar of Bohemia (who was then in possession of Vienna) to acknowledge the election of the emperor Rudolph. It was besieged by the Turks under Solyman the Magnificent, with an army of 300,000 men; but the defense, though conducted by only about 16,000 regular troops, and 4000 citizens, was so valiant that the Turks were forced to retire with the loss of 70,000 of their best troops. In July, 1683, it was again besieged by the Turks, headed by the grand vizier Kara-Mustapha. The defense was most valiantly conducted by Count Rudiger of Starhemberg, but had become almost hopeless, when John Sobieski, king of Poland, suddenly appeared with an army, and the Turkish host was almost annihilated, September 12, 1683. Vienna was taken by the French under Prince Murat, November 14, 1805; evacuated January, 1806; was again captured by the French, May 13, 1809; but was restored on the conclusion of peace, October 14, 1809. The revolt in Hungary induced an insurrection in Vienna, March 13, 1848. A second insurrection broke out, barricades were raised, and Count Latour, the war minister, was murdered, October 6, 1848; the emperor took flight, October 7; and the city was bombarded by Windischgratz and Jeliachich, October 28; it surrendered to the imperial troops on October 30, having suffered considerably from the bombardment. The fortifications were demolished, and the city enlarged and beautified, 1857-58. The Prussians encamped near Vienna, and a state of siege was proclaimed, July, 1866. The following treaties were concluded in Vienna: (1) The treaty between the emperor of Germany and the king of Spain, by which they confirmed to each other such parts of the Spanish dominions as they were respectively possessed of; and by a private treaty the emperor engaged to employ a force to procure the restoration of Gibraltar to Spain, and to use means for placing the Pretender on the throne of Great Britain. Spain guaranteed the Pragmatic Sanction, April 30, 1725. (2) Treaty of alliance between the emperor of Germany, Charles VI., George II., king of Great Britain, and the states of Holland, by which the Pragmatic Sanction was guaranteed, and the disputes as to the Spanish succession terminated (Spain acceded to the treaty on July 22). This treaty was signed March 16, 1731. (3) Treaty of peace

between the emperor Charles VI. of Germany and the king of France, Louis XV., by which the latter power agreed to guarantee the Pragmatic Sanction, and Lorraine was ceded to France. Signed November 18, 1738. (4) Treaty between Napoleon I. and Francis (II. of Germany) I. of Austria, by which Austria ceded to France the Tyrol, Dalmatia, and other territories, which were shortly afterwards declared to be united to France under the title of the Illyrian Provinces, and engaged to adhere to the prohibitory system adopted towards England by France and Russia, October 14, 1809. (5) Treaty between Great Britain, Austria, Russia, and Prussia, confirming the principles on which they had acted by the treaty of Chaumont, March 1, 1814. Signed March 28, 1815. (6) Treaty between the king of the Netherlands on the one part and Great Britain, Russia, Austria, and Prussia on the other, agreeing to the enlargement of the Dutch territories, and vesting the sovereignty in the house of Orange, May 31, 1815. (7) Treaty by which Denmark ceded Swedish Pomerania and Rugen to Prussia, in exchange for Lauenburg, June 4, 1815. (8) Commercial treaty for twelve years signed between Austria and Prussia. Signed at Vienna, February 19, 1858. (9) Treaty for the maintenance of Turkey, by the representatives of Great Britain, France, Austria, and Russia. Signed April 9, 1864. (10) Treaty between Austria, Prussia, and Denmark, by which Denmark ceded the duchies, October 30, 1864. (11) Treaty of peace between Austria and Italy; Venetia given up to Italy, October 3, 1866.

View of a Place. A reconnoissance of a fortified town, its situation, the nature of the country about it, as hills, valleys, rivers, marshes, woods, hedges, etc.; taken in order to judge of the most convenient place for opening the trenches, and carrying out the approaches; to find out proper places for encamping the army, and for the park of artillery.

Vigne (Fr.). In ancient times, a shed, or gallery with a roof and sides, made of double hurdles, 18 or 20 feet long, and 7 or 8 feet wide, upon wheels. Vignes were used to establish a covered communication between the towers, testudos, etc., of the besiegers.

Vigo. A seaport town of Spain, in Galicia, situated on an inlet of the Atlantic called the Ria de Vigo, 78 miles southwest from Corunna. Vigo was attacked and burned by the English under Drake and Norris in 1589. Vigo was taken by Lord Cobham in 1719, but relinquished after raising contributions. It was again taken by the British, March 27, 1809.

Vikings. Scandinavian chiefs, Swedes, Danes, and Norsemen, who in the 4th century migrated eastward, to the countries beyond the Baltic, and westward and southward, chiefly to the British Isles.

Villafranca. A town of Austrian Italy,

in the delegation and 9 miles southwest from Verona, on the Tartaro. This place is remarkable for the personal interview which took place here between the emperors of France and Austria, July 11, 1859, and the peace in consequence concluded, by which Lombardy was given to Sardinia.

Villages. Cavalry, the better to preserve their horses, should occupy villages whenever the distance of the enemy, and the time necessary to repair to its posts in battle, will permit. Their quarters should be preferably farm-houses or taverns having large stables. Posts are established by the colonel or commanding officer, and the squadrons conducted to their quarters by their respective captains. Where in an exceptional case regular distributions are not made, the resources which the household assigned as quarters presents are equally divided. About two hours after their arrival, the squadrons in succession water their horses and then give forage. Cavalry, and infantry also, should, wherever thus cantoned near an enemy, occupy, when it can be done, houses which will hold an entire company or some constituent fraction of a company, and at break of day stand to their arms. When in the same cantonment, cavalry should watch over the safety of the cantonment by day and the infantry by night; and in the presence of an enemy they should be protected by an advance guard and natural or artificial obstacles.

Villa Viciosa. A village of Spain, in New Castile, in the province of Guadalajara. Here, in 1710, was fought the battle which closed the War of Succession, and placed Philip V. upon the Spanish throne.

Villa Viciosa. A town of Portugal, province of Alemtejo. Here the Portuguese under the French general Schonberg defeated the Spaniards, 1665.

Villeta. In Paraguay, South America, where Lopez and the Paraguayans were totally defeated by the Brazilians and their allies, December 11, 1868.

Vimeira. A village of Portugal, in the province of Estremadura, 7 miles north from Torres Vedras. At this place the British under Sir Arthur Wellesley defeated the French and Spanish forces under Marshal Junot, August 21, 1808. The attack made by the French with great bravery was gallantly repulsed; it was repeated by Kellerman at the head of the French reserve, which was also repulsed, and the French being charged with the bayonet, withdrew on all points in confusion, leaving many prisoners.

Vincennes. A town of France, department of Seine, 5 miles east-southeast from the Louvre in Paris. In reality, the town is merely a great fortress and barracks, and is famous for its arsenal, and for its school for the practice of shooting. At the latter the Chasseurs de Vincennes, and all the best marksmen of the army, are trained. Among the famous men who have been confined in this fortress may be mentioned Henry IV.,

the Prince of Condé, Cardinal de Retz, Mirabeau, and the Duc d'Enghein, who was shot in the moat of the castle by order of Bonaparte.

Vincent, St. An island in the West Indies; it was long neutral, but at the peace of 1763 the French agreed that the right to it should be vested in the English. The latter soon after engaged in a war against the Caribs, on the windward side of the island, who were obliged to consent to a peace. In 1779 the Caribs greatly contributed to the reduction of this island by the French, who, however, restored it in 1783. In 1795 the French landed some troops, and again instigated the Caribs to insurrection, which was not subdued for several months.

Vincible. Capable of being overcome or subdued; conquerable.

Vindelicia. A Roman province south of the Danube, bounded on the north by the Danube which separated it from Germany, on the west by the territory of the Helveti in Gaul, on the south by Rætia, and on the east by the river *Enus* (now *Inn*). It was originally part of the province of Rætia, and was conquered by Tiberius in the reign of Augustus. The southern portion of this province was inhabited by the Vindelici, a warlike people. The other tribes in Vindelicia were the Brigantii, the Licatii, and the Brunii. Vindelicia fell into the hands of the Alemanni in the 4th century, and from this time the population of the country appears to have been entirely Germanized.

Vinegar. In transportation by water vinegar is essential to the comfort of horses, and should be freely used by sponging their mouths and noses repeatedly, and also their mangers. A small portion of vinegar drank with water supplies the waste of perspiration of men in the field. It is better than rum or whisky; it allays thirst, and men who use it avoid the danger of drinking cold water when heated, and are not fevered as they are too apt to be by the use of spirituous liquors.

Vinegar-Hill. Near Enniscorthy, in Wexford, Southeast Ireland. Here the Irish rebels encamped and committed many outrages in the surrounding country. They were gradually surrounded by the British troops, commanded by Lake, June 21, 1798, and after a fierce struggle, with much slaughter, totally dispersed.

Violence. See APPENDIX, ARTICLES OF WAR, 21 and 56.

Vireton (Fr.). An arrow formerly made very long, light, and so feathered as to revolve round its own axis; also called *vire*.

Virginia. One of the thirteen original United States of America, and is bounded on the north by Pennsylvania, Maryland, and West Virginia, east by Maryland and the Atlantic Ocean, south by North Carolina and Tennessee, and west by Kentucky and West Virginia. The shores of Virginia were first explored by Sebastian Cabot, 1498, and again under the auspices of Sir Walter

Raleigh in the reign of Queen Elizabeth, in whose honor it was named; was first settled by an English colony, on the James River, May 13, 1607, which consisted mostly of gentlemen of fortune, and persons of no occupation. The friendly Indians sold them land and provisions; but the diseases of a damp climate swept off half the settlers the first autumn. The energy of Capt. John Smith saved the colony from destruction; and in 1609 it was reinforced by 500 persons, who were reduced by sickness and starvation to 60. They had embarked to abandon the settlement, when Lord Delaware came with emigrants and supplies. In 1622 the colony was reduced by wars and massacres from 4000 to 2600; but in 1624 it became a crown colony, and increased, so that in 1649 there were 15,000 English and 800 negroes in it. In 1754, the colonial militia took part in the French war; and Maj. George Washington took part in Gen. Braddock's campaign. In 1769, Thomas Jefferson, a member of the House of Burgesses, asserted for the colony the right of self-taxation, denying the right of Parliament to tax the colonies. In 1773, Patrick Henry, Thomas Jefferson, and Richard Henry Lee were appointed a committee to confer with the other colonies, and urged upon their delegates the Declaration of Independence. Virginia, the earliest settled, largest, and most populous of the thirteen original States, called the Old Dominion, was the first to propose the confederacy and the Constitution. On April 17, 1861, this State passed the ordinance of secession. The Confederate government was invited to Richmond, which became the centre of military operations. Virginia was occupied by the Federal troops during the whole of the civil war, and a great many hotly-contested battles were fought on her soil. The State was restored to the Union, January 28, 1870.

Virginia, West. A new State of the American Union, and separated from the above, because antagonistic in political interests; it was organized in August, 1861, and admitted into the Union by act of Congress, December 31, 1862, taking effect June 20, 1863. The State comprises 52 counties, lying west of the Alleghanies.

Virole. In heraldry, the hoop, ring, or mouth-piece of a bugle or hunting-horn.

Viroid. In heraldry, furnished with a virole or viroles.

Visigoths. See GOTHs.

Visit, To. To go to any place, as guard quarters, barracks, hospital, etc., for the purpose of noticing whether the orders or regulations which have been issued respecting it are observed.

Visiting Officer. He whose duty it is to visit the guards, barracks, messes, hospital, etc. The same as orderly officer.

Visor. That part of the helmet which covers the face.

Vitrified Forts. The name given to certain remarkable stone inclosures bearing

traces of the action of fire, about 50 of which exist in various parts of Scotland. They are generally situated on a small hill, overlooking a considerable valley, and consist of a wall, which may have originally been about 12 feet in height, inclosing a level area on the summit of a hill. The most remarkable feature of these structures is, that the wall is always more or less consolidated by the action of fire,—in some cases only giving a glassy coating to its inner side, while in other instances the vitrification has been most complete, the ruins assuming the character of vast masses of coarse glass.

Vittoria. A town of Spain, the chief town of the province of Alava, 80 miles southeast from Bilbao. This place is the site of a brilliant victory obtained by Wellington over the French army commanded by Joseph Bonaparte, king of Spain, and Marshal Jourdan, June 21, 1813. The hostile armies were nearly equal, from 70,000 to 75,000 each. After a long and fearful battle, the French were driven, towards evening, through the town of Vittoria, and in their retreat were thrown into irretrievable confusion. The British loss was 22 officers and 479 men killed; 167 officers and 2640 men wounded. Marshal Jourdan lost 151 pieces of cannon, 451 wagons of ammunition, all his baggage, provisions, cattle, and treasure, with his baton as marshal of France. Continuing the pursuit on the 25th, Wellington took Jourdan's only remaining gun.

Vivandière. In continental armies, and especially that of France, a female attendant in a regiment, who sells spirits and other comforts, ministers to the sick, marches with the corps, and contrives to be a universal favorite. Although a familiar friend to all, these women contrive to maintain themselves respectable, and generally respected; and a corps is usually extremely jealous of the slightest discourtesy being shown to its vivandière. The woman wears the uniform of the regiment, short petticoats taking the place of the man's tunic.

Vlissingen, or Flushing. See **FLUSHING**.

Vocentii. A powerful and important people in Gallia Narbonensis, inhabiting the southeastern part of Dauphiné, and a part of Provence. They were allowed by the Romans to live under their own laws, and, though in a Roman province, they were the allies and not the subjects of Rome.

Voided. In heraldry, having the inner part cut away, or left vacant, a narrower border being left at the sides, the color of the field being seen in the vacant space;—said of a charge or ordinary.

Voider. In heraldry, one of the ordinaries, whose figure is much like that of the flanch or flasque.

Volant. In heraldry, flying. A bird volant is represented flying bendways towards the dexter side of the shield; and its position may be distinguished from that of a bird rising, by the legs being drawn up towards the body.

Volant. A piece of steel on a helmet, presenting an acute angle to the front.

Volcae. A powerful Celtic people in Gallia Narbonensis, divided into the two tribes of the Volcae Tectosages and the Volcae Arecomici, extending from the Pyrenees and the frontiers of Aquitania along the coast as far as the Rhone. They lived under their own laws, without being subject to the Roman governor of the province, and they also possessed the Jus Latii. The Tectosages inhabited the western part of the country from the Pyrenees as far as Narbo, and the Arecomici the eastern part from Narbo to the Rhone. A portion of the Tectosages left their native country under Brennus, and were one of the three great tribes into which the Galatians in Asia Minor were divided.

Volhynia. A frontier government of West Russia, bounded on the southwest by Galicia, and on the west by Poland, from which it is separated by the river Bug. Volhynia in early times belonged to the ancient Russians, but was conquered by the Lithuanians and Poles in 1320, and remained in their hands till its annexation to Russia in 1798.

Volley. The simultaneous discharge of a number of fire-arms.

Volokolamsk. A town of Russia in Europe, in the government of Moscow, 60 miles northwest from Moscow. It has suffered many misfortunes, having been twice plundered and almost destroyed by the Tartars, and taken by the Poles in 1613.

Volsci. An ancient people in Latium, but originally distinct from the Latins, dwelt on both sides of the river Liris, and extended down to the Tyrrhene Sea. Their language was nearly allied to the Umbrian. They were from an early period engaged in almost unceasing hostilities with the Romans, and were not completely subdued by the latter till 338 B.C., from which time they disappear from history.

Volsinii, or Vulsinii (now Bolsena). Called *Velsina*, or *Velsuna*, by the Etruscans, one of the most ancient and most powerful of the twelve cities of the Etruscan Confederation, was situated on a lofty hill on the northeastern extremity of the lake called after it, *Lacus Volsiniensis* and *Vulsiniensis* (now Lago di Bolsena). Volsinii is first mentioned in 392 B.C., when its inhabitants invaded Roman territory, but were easily defeated by the Romans, and were glad to purchase a twenty years' truce on humiliating terms. The Volsiniensis also carried on war with the Romans in 311, 294, and 280, but were on each occasion defeated, and in the last of these years appear to have been finally subdued. On their final subjugation their city was razed to the ground by the Romans, and its inhabitants were compelled to settle on a less defensible site in the plain.

Voltigeurs. Are picked companies of irregular riflemen in the French regiments. They are selected for courage, great activity,

and small stature. It is their privilege to lead the attack.

Volturno. A river of Naples, which rises in the province of Sannio or Molise, and, after a course of 90 miles, falls into the Gulf of Gaeta 20 miles from Naples. A great battle was fought on the banks of this river in 1860, between the troops of Francis II., king of Naples, and the followers of Garibaldi.

Volunteers. See MILITIA.

Vorant. In heraldry, a term applied to an animal represented as swallowing another; as, sable, a dolphin naissant, vorant a fish proper.

Vossem, Peace of. Between the elector of Brandenburg and Louis XIV. of France; the latter engaged not to assist the Dutch against the elector; signed June 6, 1673.

Votes. See FINDING.

Vougle, or Vouillé (Southwest France; near Poitiers). Here Alaric, king of the

Visigoths, was defeated and slain by Clovis, king of France, 507. Clovis immediately after subdued the whole country from the Loire to the Pyrenees, and thus his kingdom became firmly established. A peace followed between the Franks and the Visigoths, who had been settled above one hundred years in that part of Gaul called Septimania.

Vulned. A heraldic term, applied to an animal, or part of an animal,—as, for example, a human heart, wounded, and with the blood dropping from it.

Vulnerable. Susceptive of wounds; liable to external injuries; capable of being taken; as, the town is extremely vulnerable in such a quarter. It is also applied to military dispositions; as, the army was vulnerable in the centre, etc. An assemblage of men without arms, or with arms but without discipline, or having discipline and arms, without officers, are vulnerable.

W.

Wad. To insert or crowd a wad into; as, to wad a gun.

Wad. See GROMMET, and JUNK-WADS.

Wad-hook. A screw or hook to draw wadding out from a gun.

Wage Battle, To. To give gage or security for joining in the *duellum*, or combat.

Wager of Battle. In ancient law, the giving of gage or pledge for trying a cause by single combat, formerly allowed in military, criminal, and civil causes. In writs of right, where the trial was by champions, the tenant produced his champion, who, by throwing down his glove as a gage or pledge, thus waged or stipulated battle with the champion of the demandant, who, by taking up the glove, accepted the challenge. The wager of battle, which has long been in disuse, was abolished in England in 1820.

Wagon. A vehicle for the conveyance of goods or passengers, is mounted on four wheels, but varies considerably in the construction of its other parts, according to the species of traffic in which it is employed. They are used by armies for the transportation of subsistence, other military stores, baggage, ammunition, sick and wounded. The following wagon has been adopted for use in the service of the U. S. army: The body to be straight, 8 feet 6 inches wide, 1 foot 9 inches deep, 9 feet 6 inches long at the bottom, and 10 feet at the top, sloping equally at each end, all in the clear or inside; the floor 9 feet 10½ inches long, 8 feet 6 inches wide, and 7½ inches thick. Top

sides 6 inches wide, 7½ inches thick, 10 feet 2 inches long on the bottom edge, sloping the same as the lower side boards. Six bows of good ash or oak, 2 inches wide, ½ inch thick, with three staples to confine the ridge-pole to its place; one ridge-pole 11 feet 8 inches long, 1½ inches wide, ½ inch thick; seat-boards 8 feet 6 inches long, 1 foot wide, ½ inch thick to rest on top edge of sides on upright spiral springs, so arranged as to be used with or without the top sides; two plates 7 inches long, 1½ inches wide, ½ inch thick, with two bolts in each, for the front wheels to strike against in turning the wagon. The tongue to be 10 feet 6 inches long, 4 inches wide, 2½ inches deep at front end of hounds, 1½ inches wide, and 2½ inches deep at point or front end, and so arranged as to lift up the front end of it to hang within 2 feet 6 inches of the ground when the wagon is standing at rest on a level surface; front hounds 6 feet long, 2½ inches deep, 3½ inches wide over axle, and to retain that width to the back end of tongue; jaws of hounds 1 foot 6 inches long and 2½ inches square at the front end. Axle-stock 4 feet ½ inch long, 8½ inches wide, 8½ inches deep. Hind hounds 4 feet 11 inches long, 2½ inches deep, and 2½ inches wide back, and 2½ inches wide front; jaws 10 inches long and 4 inches wide at the end where they rest on coupling-pole. Coupling-pole 8 feet 9 inches long, 3½ inches wide, 2½ inches deep, with a rivet through front end. Wheels 8 feet 8 inches and 4 feet 8 inches high; sixteen spokes 2 inches wide

and 2 inches thick at hub, and 2 inches wide and $1\frac{1}{2}$ inches thick at felloes; eight felloes 2 inches wide, $2\frac{1}{2}$ inches deep; hubs 9 inches diameter at flanges, $8\frac{1}{2}$ inches diameter at front, 4 inches diameter at back end, 12 inches long; tires 2 inches wide, $\frac{1}{2}$ inch thick, fastened with 8 screw-bolts, one in each felloe. Distance from the centre of king-bolt hole to centre of back axle, 5 feet $9\frac{1}{2}$ inches; and from centre of king-bolt hole to the centre of bolt in jaw of hind hounds, 1 foot 10 inches; distance from the centre of hind axle to centre of bolt in jaw of hind hounds, 8 feet $11\frac{1}{2}$ inches, and from the centre of king-bolt to centre of slider 2 feet $2\frac{1}{2}$ inches; distance between the inside of front and hind standards, 5 feet $8\frac{1}{2}$ inches,—to receive the body, which is 5 feet 8 inches from outside to outside of cleats of sides. Weight of model wagon, 1825 pounds, complete, for four horses or mules. See **ORDNANCE, CARRIAGES FOR, TRAVELING KITCHEN, and TRAVELING FORGE.**

Wagon-body, Ponton. See **PONTONS, WAGON-BODY PONTONS.**

Wagoner. One who conducts a wagon; a wagon-driver. The number of master-wagoners and wagoners allowed in the quartermaster's department U. S. army is limited only by the exigencies of the service.

Wagon-master. A person in charge of one or more wagons, especially of those used for transporting freight, as the supplies of an army, and the like. The quartermaster-general is authorized to employ from time to time as many forage-masters and wagon-masters as he may deem necessary for the service, not exceeding 20 in the whole, who shall be entitled to receive \$40 per month and three rations a day, and forage for one horse; and neither of whom shall be interested or concerned directly or indirectly in any wagon or other means of transport employed by the United States, nor in the purchase or sale of any property procured for or belonging to the United States, except as an agent of the United States.

Wagon-train. An indispensable companion of an army under this or some other title. It serves to convey the ammunition, provisions, sick, wounded, camp equipage, etc. Wagons in convoy travel at a rate of from 1 to 2 miles an hour, according to the state of the roads, and other circumstances; and a mile may be said to contain 100 wagons. A great object in the march of a convoy, is to preserve the draught animals as much as possible from fatigue. For this purpose, if the convoy amount to many hundred wagons, they must be formed into divisions of not more than 500 each. Should it consist of thousands, it will be advisable to form them into grand divisions, and then again into subdivisions of 500 each. By this means, and by calculating the time of departure, each division may remain at rest until just before its time of movement, and the necessity will thus be prevented of the latter part of a large convoy being harassed

for a considerable time before its turn to move. The different divisions of the convoy should be numbered, and obliged each day to change the order of their marching. Whenever the progress of a wagon-train is arrested by the breaking down of one of the wagons, or other delay, all the wagons in rear of the stoppage should immediately drive up into the first open space, to as great a number as it will hold. This will keep the convoy together, and better under the care of the escort. The escort should be divided into front, centre, and rear guards; besides the divisions in the flanks, which should never be more than 400 yards from each other.

Wagram. A village of Lower Austria, on the left bank of the Rossbach, 11 miles northeast from Vienna. It is the site of a battle between the French under Napoleon, Davoust, Masséna, and Macdonald, and the Austrians under the Archduke Charles, in which the former were victorious, July 5-6, 1809. The Austrians retreated in the most orderly manner, carrying with them about 5000 prisoners, and leaving about 25,000 dead or wounded on the field of battle,—the French loss being about equal; the latter claim to have taken 20,000 prisoners.

Wahabees, Wahabis, or Wahabites. A warlike Mohammedan reforming sect, considering themselves the only true followers of the Prophet, arose in Arabia about 1750, under the rule of Abd-el-Nahab (Ibn-abd-ul-Wahab). His grandson Saoud (Saoud, or Saoud), in 1801, defeated an expedition headed by the caliph of Bagdad. The conquest of Hejaz was next undertaken by the Wahabees. In 1803, Saoud collected a large army, defeated Ghaleb, the ruler of Mecca, in several battles, laid siege to Mecca, which, after a resistance of two or three months, surrendered at discretion. Not the slightest excess was committed, but the people had to become Wahabees. Failing to take Jiddah, into which Ghaleb had thrown himself, the Wahabi forces went northwards, and, in 1804, took Medina, where they stripped the tomb of Mohammed of its accumulated treasures, and prohibited the approach to it of all but Wahabees. For several years after the conquest of Hejaz, Saoud continued to extend and consolidate his power. Plundering incursions were made to the very vicinity of Bagdad, Aleppo, and Damascus. On the east, Saoud took the island of Bahrein, and annexed a part of the Persian coast, on the east side of the Gulf, and exacted tribute from the sultan of Oman. This brought him into conflict with Great Britain, which sent (1803) a force and severely chastised the Wahabi pirates that infested the commerce of the Persian Gulf. Saoud's son, Abdallah, long resisted Mehemet Ali, pasha of Egypt, but in 1818 he was defeated and taken prisoner by Ibrahim Pasha, who sent him to Constantinople, where he was put to death. Ibrahim continued some months in Arabia, consolidating his conquests through-

out Nejed and the adjoining provinces. But soon an insurrection broke out, and the Egyptians had to retire to Kasim, and Turki, a son of Abdallah, was proclaimed sultan of Nejed. Renewed expeditions were undertaken by the Egyptian commanders, driving, first, Turki from his capital for a time and then his son and successor, Feysul. But soon after the death of Mehemet Ali (1849) the Egyptians gave up the struggle; Feysul was recalled from exile; and under him and his son Abdallah II., who unites in a high degree the fanaticism and ferocity of the Wahabi, with great skill in military tactics, the Wahabi sway, according to the accounts of Palgrave in 1868, and of Col. Pelly in 1865, had become more powerful and extensive, and threatens to swallow up the entire peninsula.

Wahlstatt. See KATSBACH.

Wait. Ambush. *To lay wait*, to lie in ambush; to prepare an ambuscade. *To lie in wait*, to lie in ambush; to be secreted in order to fall by surprise on an enemy.

Waiting, In. This term is used in the British service, to mark out the person whose turn is next for duty; as, an officer in waiting. *Field-officer in waiting*, is the term applied to the monthly duty taken by the field-officers of the three regiments of Foot Guards, who attend the sovereign on court-days, to present the detail of his corps, and receive the parole or other orders from her personally, which are afterwards given to the guards in orders. The field-officer in waiting commands all the troops on duty, and has the immediate care of the sovereign's person within-doors, as the gold stick has of it while in court. The latter also receives the parole from the sovereign.

Waiving Amain. A salutation of defiance, as by brandishing weapons, etc.

Waiwode, or Waywode. In the Turkish empire, the governor of a small province or town; a general.

Wakefield. A town of England, in the West Riding of Yorkshire, 26 miles from York. Near it is the site of a battle between Margaret, the queen of Henry VI., and the Duke of York, in which the latter was slain, and 8000 Yorkists fell upon the field, December 31, 1460. The death of the duke, who aspired to the crown, seemed to fix the good fortune of Margaret; but the Earl of Warwick espoused the cause of the duke's son, the Earl of March, afterwards Edward IV., and the civil war was continued.

Walcheren. An island of Holland, in the province of Zealand, in the German Ocean, at the mouth of the Scheldt. The unfortunate expedition of the British to this isle in 1809 consisted of 85 ships of the line, and 200 smaller vessels, principally transports, and 40,000 land forces, the latter under the command of the the Earl of Chatham, and the fleet under Sir Richard Strachan. For a long time the destination of the expedition remained secret; but before July 28, 1809, when it set sail, the French journals

had announced that Walcheren was the point of attack. Perhaps a more powerful and better appointed armament had never previously left the British ports, or ever more completely disappointed public expectation. The plan was to send the fleet and army up the Scheldt, and attack Antwerp (the principal naval station and arsenal in the north of France), whose fortifications, though formidable, were much in need of repair, and whose garrison at the time only numbered about 2000 invalids and coast-guards; while there were not more than 10,000 French soldiers in Holland. The expedition, after numberless needless delays, at last sailed on July 28, and reached the Dutch coast on the following day. But, instead of obeying the orders of the minister of war, Lord Castlereagh, to *advance at once in force against Antwerp*, the commander-in-chief, Lord Chatham, frittered away his time in the reduction of Vlissingen (Flushing), which was not effected till August 16, by which time the garrison of Antwerp had been reinforced by King Louis Bonaparte with the troops at his command (about 6000), and by detachments sent from France, which swelled the garrison, by August 20, to 15,000 men. About the end of August, Chatham, who, as a general, was a methodical incapable, "found himself prepared" to march upon Antwerp, but by this time 80,000 men, under Bernadotte, were gathered to its defense, and the English army was decimated by marsh-fever, so that success was not to be hoped for. However, it was judged right to hold possession of Walcheren, in order to compel the French to keep a strong force on the watch in Belgium, and, accordingly, 15,000 men remained to garrison the island, the rest returned to England; but the malaria proved too fatal in its ravages, and as peace had been concluded between Austria and France, this force was also recalled. Thus an excellently devised scheme, through utter stupidity of the agent chosen by royalty to carry it out, failed in every point of consequence, and ended in the loss of 7000 men dead, and the permanent disablement of half the remainder. The House of Commons instituted an inquiry, and Lord Chatham resigned his post of master-general of the ordnance, to prevent greater disgrace; but the policy of the ministers in planning the expedition was, nevertheless, approved.

Wales (anc. *Britannia Secunda*). A principality in the southwest part of Great Britain. After the Roman emperor Honorius quitted Britain, Vortigern was elected king of South Britain. He invited over the Saxons to defend his country against the Picts and Scots; but the Saxons perfidiously sent for reinforcements, consisting of Saxons, Danes, and Angles, by which they made themselves masters of South Britain. Many of the Britons retired to Wales, and defended themselves against the Saxons, in their inaccessible mountains, about 447. In this state Wales remained unconquered till Henry

II. subdued South Wales in 1167; and in 1282, Edward I. entirely reduced the whole country, putting an end to its independence, by the death of Llewelyn, the last prince. The Welsh, however, were not entirely reconciled to this revolution, till the queen gave birth to a son at Caernarvon in 1284, whom Edward styled prince of Wales, which title the heir to the crown of Great Britain has borne almost ever since. For further history of Wales, see separate articles in this work.

Walk About. A military expression used by British officers when they approach a sentinel, and think proper to waive the ceremony of being saluted.

Wall. A series of brick, stone, or other materials, carried upward and cemented with mortar. When used in the plural number, wall signifies fortification; works built for defense. *To be driven to the wall*, a figurative term, signifying to be so pressed that you can neither advance nor retreat.

Wallachia. One of the Danubian principalities, in the northeast of Turkey in Europe. This country formed part of the ancient Dacia of the Romans, and was subsequently brought under the dominion of the Goths and Huns. During the two centuries which preceded the fall of the empire of the East, it was sometimes subject to the Greek emperors, and sometimes to the monarchs of Hungary. It was conquered by the Turks in the 14th century, but the inhabitants struggled to assert their independence until 1586, when it became a province of the Ottoman empire. In 1829 it was placed under the protection of Russia, though it was still considered a dependency of Turkey. See MOLDAVIA.

Walloon Guard. The body-guard of the Spanish monarch;—so called because formerly consisting of Walloons.

Wall-piece. A small cannon (or, in ancient times, an arquebuse) mounted on a swivel, on the wall of a fortress, for the purpose of being fired at short range on assailants in the ditch or on the covert way. There are distinct evidences that the great wall of China was originally constructed for the reception of wall-pieces.

Wandewash. A town on the Coromandel coast, about 80 miles south of Madras. In 1789, when M. de Lally, the French governor in the East Indies, threatened with utter subjection the English settlements in the Carnatic, he was opposed most gallantly by Col. Coote, upon the Coromandel coast. Coote reduced the French settlements of Masulipatam and Conjeveram, and made a vigorous attack upon Wandewash, which he captured. Lally, in the autumn of 1789, made a bold attempt to regain possession of the disputed settlement, but his force was utterly broken; he lost 600 men, and was happy to save the wreck of his army by abandoning his camp to the victor.

Wapinschaw. A periodical gathering of the people, instituted by various Scots stat-

utes, for the purpose of exhibiting their arms, these statutes directing each individual to be armed on a scale proportionate to his property. There are numerous Scots acts of the 15th and 16th centuries regulating the subject of wapinschaws. In the time of war or rebellion, proclamations were issued charging all sheriffs and magistrates of burghs to direct the attendants of the respective wapinschawings to join the king's host. During the reign of the later Stuarts, attendance on the wapinschaws was enforced with considerable strictness; and in addition to military exercises, sports and pastimes were carried on by authority at these gatherings. The Covenanters, in consequence of this sport being of a kind disapproved by them, did what they could to discourage attendance on the wapinschaws.

War. A contest between nations or states, carried on by force, either for defense or for revenging insults and redressing wrongs, for the extension of commerce or acquisition of territory, or for obtaining and establishing the superiority and dominion of one over the other. It is the armed conflicts of sovereign powers, declared and open hostilities. Wars are various in their occasions and objects; but in all cases, the aim of each contending party is to weaken and overthrow the opposing party. At one time, the art of war was supposed to consist very much in wearing out the enemy by a slow process of exhaustion, and thus wars were much protracted. But more recently, the greatest generals have adopted the method of rather endeavoring to strike sudden and terrible blows, by which the war is sooner brought to a termination, and this method, although it may often have been adopted without regard to considerations of humanity, is, in all probability, less productive of suffering to mankind than the other. Among rude nations, wars are conducted by tumultuary hosts, suddenly congregated, and in general, either after defeat or victory, soon dispersed. But the wars of the more civilized and powerful nations have long been conducted by armies carefully trained and disciplined; and in the case of maritime powers, by means of fleets at sea as well as of armies on land. Preparation for war among such nations requires not only the forming and training of the army, but vast provision in many various ways of the means and *matériel* of war. Much science and skill are also applied to the conduct of military operations, and the principles upon which they ought to be conducted have been carefully investigated and theories tested by an examination of the history of the most important campaigns. See STRATEGY and TACTICS.

Wars are classified in various ways. They are classified from the nature of the military operations employed in their prosecution; into *offensive* or *defensive* wars: from the end to be attained; into wars of *conquest*,

wars of *independence*, etc.: from the causes producing the war; into wars of *insurrection*, *religious* wars, etc.: from the general locality in which they are waged; into *American*, *African*, *European*, etc. Other classifications than these are also used, being based on the nature and object of the war. War is both a *science* and an *art*. All investigations which have for their object the determination of the great principles which should govern a general in conducting his military operations; all analyses which are made to show the important and essential features which characterize a campaign or battle, and comparisons made with other campaigns and battles; all deductions and formations of rules which are to be used in military operations; all these belong to the *science* of war. The practical application of these great principles and rules belongs to the *art* of war. In the science of war as well as in the other physical sciences, the facts must precede theory; and although the number of known facts is steadily increasing, the number of general principles upon which the theories of the science are based is constant, if not decreasing. These general principles are deduced by a close and critical examination of such methods of waging war as have been adopted by those great generals who are known as eminent in their profession. It is evident, then, that an intimate connection exists between military history and the science of war. Napoleon said, "Alexander made eight campaigns; Hannibal, seventeen,—one in Spain, fifteen in Italy, and one in Africa; Cæsar, thirteen, of which eight were against the Gauls and five against the legions of Pompey; Gustavus Adolphus, three; Turenne, eighteen; Prince Eugène of Savoy, thirteen; Frederick, eleven, in Bohemia, Silesia, and on the banks of the Elbe. The history of these eighty-four campaigns, written with care, would be a complete treatise on the art of war. From this source, the principles which ought to be followed, in offensive as well as defensive warfare, could at once be obtained." To these campaigns are to be added the battles and campaigns of Napoleon. Jomini, an eminent writer on military art, says, "Correct theories, founded upon right principles, sustained by actual events of war, and added to accurate military history, will form a true school of instruction for generals." If these means do not produce great men, they will at least produce generals of sufficient skill to take rank next after the "natural masters of the art of war." The sources of all treatises on the "Art and Science of War," are to be found in the military histories narrating the events and results of the battles and campaigns just enumerated.

In the progress of society, certain *usages* of war have come to be generally recognized. These, of course, have varied at different times, and in different parts of the world, according to the state of civilization and the

prevalent feelings of the time. They are also subject to modification from causes less general. But the changes which have taken place in them during the lapse of ages have been in general favorable to the interests of humanity. Prisoners of war are no longer put to death, nor are they reduced to slavery, as was once very frequently the case, but their treatment has become generally more and more mild and kind. It is a well-understood rule, however, that a prisoner of war obtaining his liberty by exchange or otherwise, with the condition of not serving again during a fixed period against the same power, forfeits his life, if he is found so serving, and is again taken prisoner. Among all civilized nations, quarter is granted in battle whenever it is sought; and there are certain usages universally prevalent with regard to the capitulation of fortified places, and of bodies of troops hopelessly hemmed in by superior forces, etc.

War, Articles of. See APPENDIX, ARTICLES OF WAR.

War, Auxiliary. Is that in which a nation succors its neighbors, either in consequence of alliances or engagements entered into with them; or sometimes to prevent their falling under the power of an ambitious prince.

War, Civil. A war between different sections or parties of the same country or nation.

War, Council of. See COUNCIL OF WAR.

War, Defensive. Is a war undertaken to repel invasion or the attacks of an enemy. Defensive war may be divided into three kinds. It is either a war sustained by a nation, which is suddenly attacked by another who is superior in troops and in means; or a nation makes this sort of war by choice on one side of its frontiers, while it carries on offensive war elsewhere; or it is a war become defensive by the loss of a battle.

War Department. See DEPARTMENT OF WAR.

War Establishment. See ESTABLISHMENT.

War, Game of. See STRATEGOS.

War, Holy. A crusade; a war undertaken to deliver the Holy Land, or Judea, from infidels. See CRUSADE.

War Minister. See MINISTER, and SECRETARY OF WAR.

War, Offensive. See OFFENSIVE WAR.

War Office. The immediate office of the British secretary of state for war, and the centre on which pivots the entire administration of the army. It is subdivided into a number of departments, each under a chief officer, who is at the head of that section of the labor, and is directly responsible to the secretary of state. The last named high officer is aided by two under-secretaries of state, an assistant under-secretary, and a military assistant. Under these and the heads of departments there are about 460 clerks, with 50 messengers, etc.

War of Succession. See SUCCESSION WARS.

War, Religious. Is a war maintained in a state on account of religion, one of the parties refusing to tolerate the other.

Waras dins. A kind of Slavonian soldiers, clothed like the Turks, with a sugar-loaf bonnet instead of a hat.

War-beat, or War-beaten. Worn down in service.

Warburg (Northern Germany). Here the French were defeated by the Duke of Brunswick and the allies, July 31, 1760.

War-cry. A cry or signal used in war. For mutual recognition and encouragement in battle, war-cries have always been common, each rude nation or tribe having its own. The ancient war-cry of the English was *Saint George!* that of the Spaniards, *San Jago!* and that of the French, *Montjoie Saint-Denis!* that of the dukes of Burgundy, *Montjoie Saint-André!* and that of the dukes of Bourbon, *Montjoie Notre-Dame.* In the feuds of the Middle Ages, each party, or the retainers of each noble family, had a distinctive war-cry. Sometimes the war-cry was the name of the family. Thus, in Scotland, the retainers of the noble houses of Douglas and of Home rushed into battle with the cry of *A Douglas! a Douglas!* or *A Home! a Home!* The French armies under Napoleon were accustomed to charge with shouts of *Vive l'Empereur!*

Ward. Watch, the act of guarding. A garrison or party stationed for defense of any place; a position of defense or guard made by a weapon in fencing. Also, to guard; to watch; to defend; to parry an attack.

Ward-Burton Rifle. See **MAGAZINE GUNS.**

War-dance. A dance among savages preliminary to going to war. Among the North American Indians, it is begun by some distinguished chief, and whoever joins in it thereby enlists as one of the party engaged in a warlike excursion. The war-dance is also indulged in upon the close of any successful expedition, as well as for pleasure.

Warden. An officer appointed for the naval or military protection of some particular district of country. In order to keep the districts of England adjoining to Scotland and Wales in an attitude of defense, great officers, called *lord wardens* of the marches, were appointed, to whom the duty of protecting the frontier was committed. From this source originated the name *ward*, applied to the subdivisions of the counties of Cumberland, Westmoreland, and Durham,—a term afterwards extended to divisions of a city, town, or burgh adopted for municipal purposes. The custodian of Dover Castle was created by William the Conqueror warden of the Cinque Ports, and guardian of the adjacent coast, an office comprising extensive jurisdiction, civil, naval, and military, the greater part of which was taken away by 18 and 19 Vict., c. 48.

Warder. A truncheon, or staff of command, carried by a king or any commander-in-chief, the throwing down of which seems to have been a solemn act of prohibition to stay proceedings.

Warfare. Military service; military life; war; hostilities; contest carried on by enemies.

Warfarer. One engaged in warfare; a military man; a soldier.

War-field. A field of war or battle.

War-horse. A horse used in war; the horse of a cavalry soldier; especially, a strong, powerful, spirited horse for military service; a charger.

Warlike. Fit for war; disposed for war; as, a warlike state. Belonging or relating to war; military; martial.

Warlike Virtues. Are love of our country, courage, valor, prudence, intrepidity, temperance, disinterestedness, obedience, wisdom, vigilance, and patience. In the celebration of the anniversary of the destruction of the Bastille, which took place at Paris July 14, 1789, the French characterized these eleven virtues by the following emblems: a pelican, a lion, a horse, a stag, a wolf, an elephant, a dog, a yoked ox, an owl, a cock, and a camel.

Warned. Admonished of some duty to be performed at a given time or place. Thus, officers and soldiers are warned for guard, etc.

War-paint. Paint put on the face and other parts of the body by savages, as a token of going to war.

War-path. The route taken by a party going on a warlike expedition,—usually applied to hostile Indians.

War-proof. Valor tried by war.

Warrant. A certificate of rank issued by commissioned officers. See **OFFICERS, WARRANT.**

Warrant. In Great Britain, is a royal ordinance on any matter relating to the army.

Warrington. A town of England, in Lancashire, on the river Mersey, 17 miles east by south from Liverpool. As the best passage of the river, it was the scene of frequent conflicts during the civil war in the reign of Charles I. In 1643 the town was twice taken by storm by the Parliamentary forces. In 1648 the Scottish army made a stand here, but were defeated by Gen. Lambert, who also here repulsed the troops under Charles II. on his way to Worcester in 1651; and in 1745 the centre arches of the bridge, over the Mersey, were broken down to impede the progress of the Highlanders under the Pretender.

Warrior. A man engaged in war or military life; a soldier; a man noted for valor and prowess; a champion.

Warsaw. Formerly the capital of Poland, now capital of the Russian, or rather Russianized, government of Warsaw, on the left bank of the Vistula, about 300 miles east of Berlin by railway. The Poles were

defeated in a three days' battle by the Swedes, July 28-30, 1656. An alliance was formed here, between Austria and Poland against Turkey, in pursuance of which John Sobieski assisted in raising the siege of Vienna (see VIENNA), March 31, 1683. Warsaw surrendered to Charles XII., 1708. A treaty was concluded here between Russia and Poland, February 24, 1768. The Russians, placed here in 1794, were expelled by the citizens with the loss of 2000 killed and 500 wounded, and 80 pieces of cannon, April 17, 1794; the Poles were defeated, by the Russians at Maciejowice, near Warsaw, October 4, 1794. The king of Prussia besieged Warsaw, July, 1794; was compelled to raise the siege in September; but it was taken by the Russians, November, 1794. On November 4, 1794, the Russian general Suwarrow, after the siege and destruction of Warsaw, cruelly butchered 80,000 Poles, of all ages and conditions, in cold blood. In August, 1807, Warsaw was constituted a duchy, and annexed to the house of Saxony. In 1818 the duchy was overrun by the Russians, and Warsaw made the residence of a Russian viceroy. A Polish revolution commenced at Warsaw, November 29, 1830. The subsequent principal events in the history of this city being intimately connected with that of the state of which it was the capital, are narrated in the article Poland.

War-scot. A contribution for the supply of arms and armor, in the time of the Saxons.

War-song. A song exciting to war; especially, among the American Indians, a song at the war-dance, full of incitements to military ardor.

War-traitor. A person who betrays to the enemy anything concerning the condition, safety, operation, or plans of the troops holding or occupying a place. The punishment is usually death.

War-whoop. The cry or shout uttered by Indians in war.

Warwickshire. A county occupying almost the very heart of England, and the centre and highest point of the great district of midland table-land. At the time of the Roman invasion the county was inhabited partly by the Cornavii, and partly by the Wigantes, or Wiccii. Under the Romans it formed part of the province of Flavia Cæsariensis. Under the Saxons, the county was included in the kingdom of Mercia, whose rulers occasionally resided at Warwick, Tamworth, and Kingsbury. After the Conquest, the powerful families, the Newburghs, Beauchamps, and Nevilles, who held the earldom of Warwick, involved the county in all the great civil wars recorded in English history. In the troubles in Henry III.'s reign, Kenilworth stood a long siege by the royal forces; in the wars of the Roses, the city of Coventry warmly embraced the Lancastrian, and the town of Warwick the Yorkist cause; and in the

war between Charles I. and his Parliament, Warwickshire was torn by the contending factions, who made special head in the neighborhood of Birmingham. Charles slept at Aston Hall, near that town, on his march through Warwickshire in 1642, and two days afterwards the first great battle of the civil war was fought on the borders of the county at Edge Hill. Swords and other weapons, used in the battle, are still occasionally plowed up. Maxstoke Castle (inhabited) is externally a remarkably perfect specimen of the fortified residences of the period of the 14th century.

Warwolf. In ancient military history, an engine for throwing stones and other great masses.

War-worn. Worn with military service; as, a war-worn soldier.

Washington City. The seat of the government of the United States of America, is in the District of Columbia, on the left bank of the Potomac River, between Anacostia River and Rock Creek, which separates it from Georgetown, 39 miles southwest from Baltimore, and 120 miles northeast from Richmond. This city was commenced in 1798, but operations were subsequently suspended in consequence of the war, and much that had been done was destroyed by the British in 1814, so that the whole edifice was recommenced in 1815, and was not entirely finished till 1828. During the civil war (1861-65), from its exposed position, it was threatened with capture, and was surrounded with fortifications, and converted into an intrenched camp.

Washington Territory. A Territory of the United States; bounded north by British Columbia, east by the Territory of Idaho, south by the Columbia River, which separates it from Oregon, and west by the Pacific Ocean. This Territory was discovered by Juan de Fuca, a Greek, in 1592; visited by a Spanish navigator in 1775, and three years after by Capt. Cook. In 1787, Berkeley, an Englishman, re-discovered the Strait of Fuca, which had been missed by the others. Settlements were made in this Territory by the Hudson Bay Company in 1828; in 1845, American settlers entered the Territory, then a part of Oregon. Wars with the Indians, in 1855 and 1858, retarded immigration, but in the latter year, 15,000 persons were attracted by gold discoveries. This Territory was organized in 1853.

Wat Tyler's Insurrection. See TYLER'S INSURRECTION.

Watch. The non-commissioned officers and men on board of transports are divided into three watches, one of which is constantly to be on deck, with at least one subaltern officer in charge of the watch.

Watch and Ward. The charge or care of certain officers to keep a watch by night and a guard by day in towns, cities, and other districts, for the preservation of the public peace.

Watch-tower. A tower on which a sen-

tinell is placed to watch for enemies or the approach of danger.

Watch-word. See PAROLE.

Water. In calculating the quantity of water required per man for drinking and cooking, it may be put down at 6 pints in temperate, and 8 pints in tropical climates. A similar amount will just allow men to wash their bodies. In stationary camps, however, the minimum daily allowance per man should be 5 gallons for all purposes, washing clothes included. Horses not doing work will thrive well on 6 gallons a day, but require from 8 to 12 when at work, according to their condition and the nature of the work. A couple of gallons extra should, under all circumstances, be allowed for washing them. Oxen require about 6 or 7 gallons daily.

In selecting positions, particularly those that are likely to be of a permanent character, a careful analysis of the water should be made by a medical man. A fair opinion can be formed as to whether it is wholesome or not, by the appearance of the inhabitants, and by tasting the water oneself. "It should be transparent, colorless, without odor, and tasteless; well aerated, cool, and pleasant to drink; it must have no deposit; vegetables should be easily cooked in it." Shallow water is always to be examined with suspicion. The water of some rivers at certain seasons is thick and muddy; in some, it is always so. To examine it without the aid of chemical tests, fill a long tumbler or other glass vessel with it. If the water has been drawn in a bucket or other vessel, shake it up and stir it well before pouring it into the tumbler or glass cylinder; let it stand for a day, or as many hours as possible; draw off the water without disturbing the sediment, which should then be carefully examined through a microscope. Vegetable decompositions and iron are the chief substances that give color to water. When water is very bad it should be boiled before drinking; after boiling it should be placed in shallow vessels, and poured from a height from one into another. Very muddy water when placed in barrels or other vessels, can be cleaned by immersing the hand containing a lump of alum in it, and moving it about for a few seconds. All the coloring matter will sink to the bottom. The longer the time that elapses between the operation and drinking, the better. Growing vegetable substances may not be always injurious, but dead vegetable matter is so without doubt. At the maximum density (39.8° Fahr.), the barometer being at 80 inches, a gallon of distilled water weighs 8.38888 avoirdupois pounds or 58,378 grains.

Water-battery. One nearly on a level with the water.

Water-bucket. See IMPLEMENTS.

Water-budget. A heraldic bearing, in the form of a yoke with two pouches of leather appended to it, originally intended to represent the bags used by the Crusaders

to convey water across the desert, which were slung on a pole, and carried across the shoulders. The Trusbutts, barons of Wartre in Holderness, bore *Trois bouts d'eau*, "three water-budgets," symbolizing at once their family name and baronial estate; and by the marriage of the heiress, similar arms came to be assumed by the family of De Ros, who bear gules, three water-budgets argent.

Water-deck. A covering of painted canvas for the saddle, bridle, and the like, of a dragoon's horse.

Waterford. A maritime county of the province of Munster, in Ireland. In the time of Ptolemy, it was inhabited by the tribe of the Brigantes. It was afterwards peopled by the Desii, who are supposed to have migrated from a tribe of the same name in Meath; and having spread themselves also over the plain country of Tipperary; those settled in Waterford were distinguished by the name of South Desii, and the others by that of North Desii. Here the Danes established a permanent settlement in the 9th century, making the city of Waterford their chief seat of government; and though frequently involved in wars with the surrounding natives, they retained possession of the city and district until their subjugation by the English, who, in 1170, under Strongbow, stormed Waterford, took their chieftain or prince prisoner, and brought the whole of the Desiis into the possession of the English. Shortly after, Henry II. granted the greater part of the county to Robert le Poer, and the remainder, with that of Cork, then a petty kingdom, to Milo de Cogan, two of his followers. King John landed at Waterford in 1211; and personally visited many parts of the country. The next king of England who visited Ireland, Richard II., landed at Waterford in 1394, with an army of 4000 men-at-arms, and 80,000 archers. The county suffered severely in the reign of Elizabeth, through the rebellion of the Earl of Desmond, and the Spanish invasion; and also in the wars of 1641, during the first years of which, its possession was the subject of continued sanguinary contention between the English and Irish forces, until it was ultimately reduced under the authority of the English Parliament by Cromwell. During the war of the Revolution, it took part with King James, and was reduced by King William's forces, under Gen. Kirk, after the decisive battle of the Boyne.

Watering-bucket. See IMPLEMENTS.

Watering-call. A trumpet sounding, on which the cavalry assemble to water their horses.

Waterloo. A village of Belgium, province of South Brabant, on the highway from Charleroi to Brussels; which was the scene of the greatest and most decisive battle of modern times. This battle was fought on June 18, 1815, between the French army of 71,947 men and 246 guns, under Napo-

leon, and the allies, commanded by the Duke of Wellington; the latter with 67,661 men and 156 guns, resisted the various attacks of the enemy from 10 o'clock in the morning until 5 o'clock in the afternoon. About that time 16,000 Prussians reached the field of battle; and by 7 o'clock, the force under Blücher amounted to above 50,000 men, with 104 guns. Wellington then moved forward his whole army, and in every point this attack succeeded. The French were forced from their positions, and fled in the utmost confusion, leaving 227 pieces of artillery in the hands of the victors. The pursuit was kept up with great energy throughout the whole night by the Prussian troopers, who seemed bent upon at once avenging the defeats of Jena, Auerstadt, and Ligny, and glutted their fierce animosity by an indiscriminate slaughter. The total loss in this battle was, from the obstinacy and determination with which it was contested, necessarily large; the figures are: British and Hanoverians, 11,678; Brunswickers, 687; Nassauers, 643; Netherlanders, 3178; a total of 16,186; which added to 6999 Prussians, gives the aggregate allied loss, 23,185. The French had 18,500 killed and wounded, and 7800 prisoners (some French accounts raise the total list of *hors de combat* to 32,000). Napoleon, quitting the wreck of his flying army, returned to Paris; and, finding it impossible to raise another, abdicated the throne of France.

Wattignies. A village of France, department of Nord, where Jourdan and the French republicans defeated the Austrians under the Prince of Coburg, and raised the siege of Maubeuge, October 14-16, 1793.

Waver. A body of troops is said to waver when it becomes unsteady if at the halt, or to hesitate and lose its order if on the march, under the fire of the enemy.

Wavre. A town in the province of South Brabant, Belgium. It is known as the scene of a desperate and protracted conflict between the French and Prussians, on June 18-19, 1815. The former under Grouchy, Gérard, and Vandamme, advanced against the Prussians at the same time as Napoleon directed the troops under his immediate orders against Wellington at Waterloo, and being much superior in number (32,000 to 15,200), drove the Prussians under Thielman into Wavre, where they defended themselves with desperate firmness, repulsing thirteen different assaults in the course of the 18th. On the following morning, Thielman, who had heard of the victory at Waterloo, attacked Grouchy, but was repulsed with vigor, though the urgent orders of Napoleon forced the latter to retreat to Laon, instead of following up his success.

Wawz, or Wawer (Poland). The Poles under Skrzynski attacked the Russians at Wawz, and after two days' hard fighting, all the Russian positions were carried by storm, and they retreated with the loss of 12,000 men and 2000 prisoners, March 31,

1831. The loss of the Poles was small, but their triumph was soon followed by defeat and ruin.

Way, Covert. See COVERT WAY.

Way of the Rounds. In fortification, a space left for the passage of the rounds between the rampart and the wall of a fortified town.

Waywode. A Slavic word meaning "leader in war," was first applied simply to the military commanders, but afterward also to the governors of the provinces, and used in Poland, Hungary, Transylvania, Moldavia, and Wallachia. It has been superseded by another title, also of Slavic origin,—*hospodar*.

Weapon. An instrument of offensive or defensive combat; something to fight with; anything used, or designed to be used, in destroying or annoying an enemy.

Weaponed. Furnished with weapons or arms; armed; equipped.

Weaponless. Having no weapons; unarmed.

Wear and Tear. Said of military stores which have been worn out in service; as, the equipments were rendered useless by the wear and tear of service.

Wednesfield. A parish of England, in Staffordshire. Edward the Elder gained a victory over the Danes near this place in the beginning of the 10th century.

Well. A depth which the miner sinks under ground, with branches or galleries running out from it, either to prepare a mine, or to discover the enemy's mine.

Well Found. Fully equipped.

Werder Rifle. See SMALL-ARMS.

Werndl Rifle. See SMALL-ARMS.

Westmorland, or Westmoreland. One of the lake counties of England, bounded by Cumberland on the northwest and north, by Durham and Yorkshire on the east, and by Lancashire on the south and west. Its earliest inhabitants, as far as any traces remain, were principally, though not exclusively, Celts of the Cambrian division. Early in the 2d century this part of England was overrun by the Romans, who established their power by means of numerous forts and well-constructed roads. From the withdrawal of the Romans to the coming in of the Angles and the Danes the history of Westmorland is a complete blank. The invasion of the former people, who appear to have penetrated along the lines of the Roman roads, probably commenced about the close of the 7th century, and soon after the Northmen, when driven from the other parts of England, took refuge in this country. Westmorland, with other northern counties, was either held or claimed during some centuries by Scotland, and thus continued for a long time a cause of contention between the two countries; but in 1237 the king of Scotland was induced to give up his claim to it. From this time to the period of the civil war of the reign of Charles I. Westmorland enjoyed comparative tran-

quillity. In 1648, Sir Marmaduke Langdale raised a force of upwards of 4000 men, chiefly in Cumberland and Westmorland. They were joined by the Scots, who remained in the latter county until they were compelled to remove out of it for want of provisions; and during their stay, and until the final retreat of the royalists, this district was reduced to extreme distress. In 1715 the adherents of the Stuart family passed through Westmorland on their way to Preston. And again in 1745, Prince Charles, with his Highland followers, marched through the county in his invasion of England. During the retreat of this ill-fated expedition, in December of the same year, the rear of the Highlanders was overtaken by the Duke of Cumberland's horse on Clifton Moor, when a sharp skirmish ensued, which checked the advance of the English for the moment, and hastened the retreat of the rebels.

Westphalia, or Munster, Peace of. Was signed at Munster and at Osnaburg, between France, the emperor, and Sweden; Spain continuing the war against France. By this peace the principle of a balance of power in Europe was first recognized; Alsace given to France, and part of Pomerania and some other districts to Sweden; the elector palatine restored to the Lower Palatinate; the religious and political rights of the German states established; and the independence of the Swiss Confederation recognized by Germany, October 24, 1648.

West Point. Site of the United States Military Academy, and of a fortress erected during the war of Independence, on the right bank of the Hudson River, 52 miles north of the city of New York. The Military Academy is on a plain 160 to 180 feet above the river, surrounded by the bold scenery of one of the finest river-passes in the world. The forts and a river-chain were taken by the British in 1777, but abandoned after Burgoyne's surrender, and stronger forts were built, which Gen. Arnold bargained to betray,—a plot foiled by the arrest of Maj. André. For history of the Military Academy at West Point, see **MILITARY ACADEMIES**.

West Virginia. See **VIRGINIA, WEST**.

Wexford. A maritime county of the province of Leinster, Ireland. The maritime position of Wexford laid it open early to the incursions of the Danes, to whom the name Wexford, or Weisford, is traced by antiquaries. It was the first landing-place of the English in the invasion, and formed part of the tract granted by MacMurrough to the English adventurers whose assistance he had invoked. During the civil wars which followed 1641, Wexford was the scene of frequent contests; and in the more recent insurrection of 1798, it formed the theatre of the only formidable conflicts of the peasantry with the regular troops.

Wheel. See **ORDNANCE, CARRIAGES FOR, THE CAISSON**.

Wheel, To. In tactics, to move forward or backward in a circular manner, round some given point. Wheeling is one of the most essential and important operations of the company, necessary in many changes of position, and in the formation of column and of the line.

Wheelings. Different circular motions made by horse and foot, either to the right or left, forward and backward, etc.

Wheel-lock. A sort of lock anciently used on arquebuses. It consisted of a roughened steel wheel, with chain and spring, which, when wound up like a watch, revolved rapidly, and struck fire against a flint held in the cock.

Whinyard. A sword, or hanger, so called by Butler in his "Hudibras."

Whipping. See **FLOGGING**.

White Eagle, Order of the. An order of knighthood in Poland, instituted by Vladislaus V. in 1825; revived by Frederick Augustus I. in 1705.

White Feather. A mark of cowardice. *To show the white feather*, to give indications of cowardice.

White Gunpowder. See **GUNPOWDER**.

White Plains. A village of Westchester Co., N. Y., 25 miles north-northeast of New York. A noted battle of the Revolution was fought in the vicinity, October 28, 1776, between the Americans and the British, in which the former were worsted.

Whiteboys. A body of ruffians in Ireland, so called on account of their wearing linen frocks over their coats. They committed dreadful outrages in 1761, but were suppressed by a military force, and their ringleaders executed in 1762. They rose into insurrection again and were suppressed 1786-87. Whiteboys have appeared at various times since, committing the most frightful crimes. The insurrection act was passed on their account in 1822.

Whitworth Gun. See **ORDNANCE, CONSTRUCTION OF**.

Whiz. To make a humming or hissing sound, like an arrow or ball flying through the air.

Who Comes There? The night challenge of a sentinel on post.

Whopp. A shout; a loud noise which soldiers make in charging. It is a natural though a barbarous habit, and has been preserved in civilized armies from a prevailing custom among savages, particularly the wild Indians of America.

Wicket. A small door in the gate of a fortified place, affording a free passage to the people without opening the great gate.

Wicklow. A maritime county in the province of Leinster, in Ireland. According to Ptolemy the geographer, the northern part of the county was the residence of the tribe of the Cauci, and the southern that of the Menapii. It was afterwards occupied by the Irish sept of the Byrnes and O'Tooles, who, though the district was claimed by the English after their settle-

ment, maintained their independence, and carried on an almost continual war against the new settlers until the end of the reign of Elizabeth. The inhabitants adhered to the royal cause during the war of 1641, until the arrival of Cromwell, to whose superior force they submitted without opposition. No other occurrences of historical importance took place until 1798, when several bands of insurgents sought refuge in the mountain fastnesses after the dispersion of their main body in Wexford, and continued to harass the neighboring counties until tranquillity was restored, partly by making terms with the leaders, and partly by establishing military posts in the interior of the country.

Widdin, or Widin. A fortified town of European Turkey. It is surrounded on the land side by morasses, and is defended by a strong citadel, by walls, and by a fortified island in the Danube. For centuries it has been a strong post in all the contests between the Turks and their northern neighbors, and it is called by the Turks the Virgin Fort, from its never having been taken.

Wield. To use with full command or power, as a thing not heavy for the holder; to manage; to handle; as, to wield a sword.

Wiesbaden. A town of Prussia, formerly capital of the independent duchy of Nassau. The Romans built a station here, and erected a fort on a hill on the northwest side of the town, still known as the Römerberg, and which was garrisoned by the 22d Roman legion. The *Mattiaci*, a subdivision of the German tribe called the *Catti*, allied themselves with the Romans; but in the 8d century, the barbarian Germans rose against the Romans, and destroyed their forts, including Wiesbaden.

Wigan. A town of England, in Lancashire, situated near the small river Douglas. In the civil war the king's troops, commanded by the Earl of Derby, were defeated and driven out of the town in 1643 by the Parliamentary forces under Sir John Smeaton. The earl was again defeated by Ashton, who razed the fortifications of Wigan to the ground in the same year; and once more by a greatly superior force commanded by Col. Lilburne, 1651.

Wight, Isle of (anc. Vecta, or Vectis). An island in the English Channel, lying off the coast of Hampshire, from which it is separated by the Solent. It was originally peopled by the Celts, who were afterwards expelled or subdued by the Belgæ; and these, in their turn, were compelled to submit, in 43, to the Roman legions under Vespasian. The Saxon kings of Wessex conquered it about 530, after a sanguinary action at Wiht-garasbyrig, supposed to be the modern Carisbrooke. In 661, it was subdued by Wulfhere, son of Penda, king of Mercia. The Danes invaded the Wight in 787, 897, 981, 998, and again in 1003, when they destroyed the town of Waltham, supposed to be identical with the modern Werror. The

French landed on the island, but were repulsed in 1340. In 1877, the French burnt the towns of Yarmouth, Newtown, and Newport, but were defeated in an attack which they hazarded upon Carisbrooke Castle. In 1545, the French forces, which had assembled under Claude d'Annebault, and fought an indecisive action with Lord Lisle at Spithead, threw themselves upon the island in four detachments at Sea View, Bembridge, Shanklin, and Bonchurch, but were repulsed with signal loss.

Wigwam (sometimes written *weekwam*). An Indian cabin or hut. The wigwam, or Indian house, of a circular or oval shape, was made of bark or mats laid over a framework of branches of trees stuck in the ground in such a manner as to converge at the top, where was a central aperture for the escape of smoke from the fire beneath. The better sort had also a lining of mats. For entrance and egress two low openings were left on opposite sides, one or the other of which was closed with bark or mats, according to the direction of the wind.

Wilderness, Battles of the. Were fought between the Federal and Confederate armies in Virginia, in May, 1864. They consisted of a series of sanguinary battles, having for their object the capture of Richmond. The plan of Gen. Grant, commander-in-chief of the Union forces, was to follow a line nearly corresponding to the route of the Fredericksburg and Richmond Railroad, making his base at Acquia Creek. For this purpose he moved down the right of the position of Gen. Lee, who commanded the Confederate army, and was prepared either to accept a battle from him on the Rapidan, or to continue his march to Spottsylvania Courthouse. Gen. Lee would not consent to be outflanked, and thereby endanger his railroad communication with Richmond. He therefore prepared to resist the progress of Grant, and commenced a rapid movement of his forces parallel with the course of the river. Gen. Hill's and Ewell's forces arrived in front of Gen. Grant's forces on Thursday, May 5, 1864.

Early on the morning of the 5th, Grant's command began to move. The 5th Corps (Warren's) advanced from its position near Wilderness Tavern, along the roads leading to Orange Court-house, 5 miles to Parker's store. This point is in Spottsylvania County, about 8 miles above Chancellorsville. The whole face of the country in that neighborhood is thickly covered with an undergrowth of field-pines, cedars, and scrub-oaks, and therefore utterly unfit for the use of cavalry or artillery. The 6th Corps (Sedgwick's) was to follow, and the 2d Corps (Hancock's) was to stretch southwesterly from Chancellorsville toward Shady Grove Church. Sheridan covered the extreme left, with the object of finding the enemy's cavalry under Stuart. This line extended nearly 5 miles, with the centre thrown forward, when the action commenced. The 5th Corps and the

advance of the enemy under Ewell met, when a fierce encounter ensued, the Federals losing about 1000 men. At different periods during the afternoon other portions of the opposing armies came in contact, and the contest became exceedingly bloody. Such was the nature of the undergrowth that there was little opportunity to use artillery. The fire of the enemy's musketry was furious, and continued until late in the night, but the Federal line was substantially as it had been when the battle commenced; both armies were still face to face, ready to attack at dawn on the morrow.

The battle of the Wilderness was renewed on May 6, and consisted of a succession of fierce attacks made by each side. Both had more or less intrenched their positions by felling timber and covering it with earth, or slight earthworks. The interval of ground between the opposing lines was fought over in some places as many as four or five times, the combatants driving each other in turn from the opposite lines of rifle-pits, and the battle continued with unabated fury until darkness set in, each army holding substantially the same position that they had on the evening of the 5th. After dark, the enemy made a feeble attempt to turn our right flank, but the promptness of Gen. Sedgwick, who was personally present and commanding that part of the line, frustrated their object. During these two days, the total loss was estimated at 15,000. On the morning of the 7th, reconnoissances showed that the enemy had fallen behind his intrenched lines, with pickets to the front, covering a part of the battle-field. Gen. Grant determined to move by his right flank, and put his whole force between Lee's forces and Richmond.

On the night of the 7th the march was commenced toward Spottsylvania Courthouse, the 5th Corps moving on the most direct road. But Lee having been apprised of the movement, and having the shorter line, was enabled to reach there first, and the battles of Spottsylvania followed, which are given below.

On the 8th, Gen. Warren met a force of the enemy, which had been sent out to oppose and delay his advance, to gain time to fortify the line taken up at Spottsylvania. This force was steadily driven back on the main force, within the recently-constructed works, after considerable fighting, resulting in severe loss to both sides. On the morning of the 9th Gen. Sheridan started on a raid against the enemy's lines of communication with Richmond.

The 9th, 10th, and 11th were spent in manœuvring and fighting without decisive results. Among the killed on the 9th was that able and distinguished soldier, Gen. Sedgwick, commander of the 6th Corps, of which Gen. H. G. Wright succeeded to the command. Early on the morning of the 12th a general attack was made on the enemy in position. The 2d Corps (Han-

cock's) carried a salient of his line, capturing most of Johnston's division of Ewell's corps and 20 pieces of artillery. But the resistance was so obstinate that the advantage gained did not prove decisive.

From the 18th to the 18th was consumed in manœuvring and awaiting the arrival of recruits from Washington. Deeming it impracticable to make any further attack upon the enemy at Spottsylvania Courthouse, orders were issued on the 18th with a view to a movement to the North Anna, to commence on the 19th, but owing to an attack of the Confederates the movement was delayed until the night of the 21st. The enemy again having the short line, and being in possession of the main roads, was enabled to reach North Anna in advance of the Federals, and took position behind it, where the battles were again renewed.

Battles of North Anna.—The 5th Corps reached the North Anna on the afternoon of the 23d, closely followed by the 6th Corps; the 2d and 9th got up about the same time. Gen. Warren effected a crossing the same afternoon and got into position. Soon after getting into position he was violently attacked, but repulsed the enemy with great slaughter. Hancock also effected a crossing after some fighting. The 6th Corps crossed on the 24th and took up a position. The attempt of the Federals on the Confederate centre was repulsed, and finding the enemy's position on the North Anna stronger than either of his previous ones, Gen. Grant withdrew on the night of the 26th to the north bank, and moved to turn the enemy's position by his right. The battle of Cold Harbor (which see) was the next serious engagement. The loss of the Federals, not including Burnside's corps, from May 5 to 31 was about 41,400. The Confederate loss is not known.

Williamsburg. A city, capital of James City Co., Va., 60 miles east of Richmond, and 68 miles northwest of Norfolk. It is situated on a level plain between James and York Rivers, 6 miles from each. It was first settled in 1682, is the oldest incorporated town in the State, and was the colonial and State capital till 1779. A battle was fought here between Gen. McClellan and the Confederates on May 5, 1862, which resulted in victory to the former.

Wilmington. A city and port of North Carolina, in New Hanover County, and situated on the Cape Fear River. It was captured by the Union forces in February, 1865, Fort Fisher, its principal defense, having been taken by storm on the 15th of the month preceding.

Wiltshire, or Wiltonshire. An inland county of England. When Cæsar invaded England, Wiltshire was occupied by the Belgæ; and the Wansdyke is pointed to as a portion of the defenses which they constructed. It was afterwards included in the province of Britannia Prima, and important Roman stations were established, of which

the chief was placed at Sorbiodunum (Old Sarum). The Saxons under Cedric were defeated by Arthur and his famous knights, but conquered the country when led by Cynric, and annexed it to the kingdom of Wessex. It became the battle-field between Saxon and Dane for many long years of warfare. A great council was held at Sarum in 1086, by William the Conqueror, which firmly fixed upon the conquered land the feudal system of the Normans. During the civil war, many important engagements took place in various parts of the county, and especially at Devizes and Malmesbury, between Roundheads and Cavaliers.

Winch. An axle turned by a crank-handle for raising weights, as from mines and the like; a windlass.

Winchelsea. A town of England, in Sussex, 87 miles northeast from Brighton. It is a place of great antiquity, and was twice pillaged, first by the French and again by the Spaniards, who landed near Farley Head.

Winchester (Rom. *Venta Belgarum*). A town of England, capital of Hampshire. It is a very ancient town, whose erection may reasonably be ascribed to the Celtic Britons. It was taken by the Saxons in 496, and by the Danes in 871-78; and was ravaged by Sweyn in 1013. Winchester was several times taken and retaken between 1641 and 1643; it was taken by Cromwell, and the castle dismantled in 1645.

Winchester. A city and capital of Frederick Co., Va., in the valley of the Shenandoah, 150 miles north-northwest of Richmond, 71 miles west by north from Washington. On March 12, 1862, it was occupied by the Federal general Banks, and during the war was the scene of frequent conflicts, and occupied in turn by the Federal and Confederate armies.

Winchester Rifle. See SMALL-ARMS, and MAGAZINE GUNS.

Windage. Is the space left between the bore of a piece and its projectile, and is measured by the difference of their diameters. The objects of windage are to facilitate loading, and to diminish the danger of bursting the piece; it is rendered necessary by the mechanical impossibility of making every projectile of the proper size and shape, by the unyielding nature of the material of which large projectiles are made, by the foulness which collects in the bore after each discharge, and by the use of hot and strapped shot. The *true windage*, which is the difference between the true diameters of the bore and projectile, increases slightly with the size of the bore, and is greater for solid shot, which are sometimes fired hot, than for hollow projectiles, which are never heated.

Loss of Force.—The ordinary windage of smooth-bore cannon, used in the U. S. service, is about 1-40 of the diameter of the bore, and the loss of force arising from the escape of gas through this windage amounts

to a very considerable portion of the entire charge. The amount of loss in any case depends on: (1) The degree of windage; (2) The caliber of the gun; (3) The length of the bore; (4) The kind of powder; (5) The charge of powder; (6) The weight or density of the ball. It is probable that the influence which some of these causes exert on the force of the charge is very slight. It has been determined by experiment, that the loss of velocity by windage is proportional to the windage. It may be stated that the loss of velocity by a given windage is directly as the windage, and inversely as the diameter of the bore, very nearly.

Wind-gauge. In a military sense, is an attachment to the sight (either front- or rear-sight) of a fire-arm by which an allowance for the effect of wind on the projectile can be made in aiming. Though usually called *wind-gauge*, it is also used to counteract *drift* or any other deviation which can be anticipated. In the old model target-rifles, the front-sight is capable of a slight movement. Some of the more recent military arms have a wind-gauge attached to the rear-sight. In the *peep-sights*, the sight-piece is moved by a screw. In the present U. S. service rifle the sight-piece is moved by hand. It has graduations to guide the marksman. The wind-gauge is frequently attached to breech-sights of cannon in Europe. In this country the Parrott gun is similarly equipped.

Wind-gun. A gun discharged by the force of compressed air; an air-gun.

Windlace. Formerly an apparatus for bending the bow of an arblast or cross-gun.

Windlass. An axis, or roller of wood, square at each end, through which are either cross-holes for handspikes, or staves across, to turn it round, by which operation it draws a rope, one end of which is attached to a weight, which is thus raised from any depth.

Windsor, Knights of. See KNIGHTS, MILITARY.

Wing. The right or left division of an army, regiment, and the like. The word is sometimes used to denote the large sides of horn-works, tenailles, and other outworks.

Wing. An ornament worn on the shoulder;—a small imitation epaulette or shoulder-knot.

Winged. In heraldry, represented with wings, or having wings, of a different color from the body.

Winnebagoes. A tribe of Indians who lived around Lake Winnebago in 1639, and were engaged in the war of Pontiac against the English in 1762. In 1794 they were severely defeated by Gen. Wayne, and were engaged in the Black Hawk war of 1831. They were removed to Minnesota in 1848, from thence to Dakota in 1863, and in the following year to Nebraska. See INDIANS AND THEIR AGENCIES.

Winter-quarters. The quarters of an army during the winter; a winter residence or station.

Wire-cartridge. A cartridge strengthened by wire ligaments.

Wires, Pointing-. See **POINTING-WIRES**.

Wisby. A once famous seaport of the Swedish island of Gothland, capital of the island, and situated on its west coast, about 180 miles south of Stockholm. In 1861, Valdemar III. of Denmark took this town by storm, and, plundering it, obtained an immense booty.

Wisconsin. One of the Northwestern States of the United States of America; it is 302 miles from north to south, and 258 from east to west. Wisconsin is bounded on the north by Lake Superior and the State of Michigan, east by Lake Michigan, south by Illinois, and west by Iowa and Minnesota, from which it is separated by the Mississippi and St. Croix Rivers. This State was explored by French missionaries in the latter part of the 17th century, and Indian trading-posts were also established. It was organized as a Territory in 1836, and admitted into the Union as a State in 1848. During the late civil war it filled its quotas cheerfully for the Union cause.

Wissembourg, or Weissenbourg. A small fortified town of Alsace, in what was formerly the French department of Bas-Rhin, situated on the Lauter. It was formerly an imperial city, was seized by Louis XIV. in 1673, and annexed to France by the treaty of Ryswick, 1697. The "lines" of Wissembourg, erected by Villars, in 1705, were taken by the Austrians and retaken by the French, 1793, after Hoche's victory at Geisberg. On August 4, 1870, the crown-prince of Prussia crossed the Lauter and gained a brilliant but bloody victory over the French (a part of MacMahon's division), storming the lines and the Geisberg. Gen. Abel Douay was mortally wounded, and about 500 prisoners were made. The killed and wounded on both sides appear to have been nearly equal. The German army, composed of Prussians, Bavarians, and Württembergers, were, it is said, about 40,000, against about 10,000 French, who fought with desperate bravery.

Witepsk, or Vitepsk. A city of Russia in Europe, where a battle was fought between the French under Marshal Victor, duke of Belluno, and the Russians commanded by Gen. Wittgenstein. The French were defeated after a desperate engagement, with the loss of 8000 men, November 14, 1812.

Withstand. To oppose; to resist; as, to withstand the attack of troops.

Witness. One who testifies in a cause, or gives evidence before a judicial tribunal; one who gives testimony. Every judge-advocate of a court-martial or court of inquiry has power to issue the like process, to compel witnesses to appear and testify, which courts of criminal jurisdiction within the State, Territory, or District where such military courts are ordered to sit may lawfully issue. For oath administered to wit-

nesses, depositions, etc., see **APPENDIX, ARTICLES OF WAR, 91, 92, and 118.**

Wittenberg. A fortified town of Prussian Saxony, capital of a circle of the same name in the government of Merseburg, on the Elbe. It has suffered several times from sieges, particularly in 1756 and 1814, having on the latter occasion been taken by storm from the French after a siege of ten months.

Wolf-hole. See **TROU DE LOUP**.

Wolgast. A seaport of Prussia, in Pomerania, situated on the Peene, about 10 miles from its entrance into the Baltic. It is a very old town, and was strongly fortified as early as the 12th century. It was taken and retaken five times between 1628 and 1675; the Russians plundered and burned it in 1718, and the Swedes retook it in 1715.

Women and Domestic Relations, Protection of. See **APPENDIX, ARTICLES OF WAR, 58.**

Wood. The most useful timbers in the United States are: the hickory, which is very tough and inflexible; white oak, tough and pliable; white ash, tough and elastic; black walnut, hard and fine-grained; white poplar, soft, light, fine-grained wood; white pine and other pines, for building; cypress, soft, light, straight-grained, and grows to a large size; dogwood, hard and fine-grained. The timber growing in the centre of a forest is best.

Wooden Fuse. See **LABORATORY STORES**.

Woolwich. A town of England, in Kent, and is the most ancient military and naval arsenal in England. It is celebrated for its royal dock-yard, where men of war have been built so early as the reign of Henry VIII., 1512. The royal arsenal was formed about 1720; it contains vast magazines of great guns, mortars, shells, powder, and other warlike stores; a foundry with several furnaces for casting ordnance; and a laboratory where fireworks, cartridges, grenades, etc., are made for public service. There is also a royal artillery barracks here which can accommodate nearly 4000 men. About 10,000 persons are employed in Woolwich Arsenal.

Woolwich Gun. See **ORDNANCE, CONSTRUCTION OF**.

Woordie-Major. The native adjutant of an Indian irregular cavalry regiment.

Worcester. The capital of Worcestershire, England, situated on the left bank of the Severn. It is one of the most ancient cities of the kingdom, and was formerly strongly fortified, as it had to resist frequent attacks from the Welsh, and in turbulent periods of English history was often the object of assault by contending parties. In the civil war the final great battle between the Puritans and the cavaliers took place here. This battle, which Cromwell called his "crowning mercy," was fought on September 8, 1651, between the Parliamentary troops, commanded by Cromwell in person, and the Scotch army of Charles II. The battle lasted several hours, and at its close

the Scotch were utterly routed, nearly all of them being killed or made prisoners.

Worcestershire. An inland county of England, forming part of the west midland division. Its early history cannot be determined with accuracy. Under the Saxons the county was included in the kingdom of Mercia. It shared in all the great civil wars of England; it was frequently the scene of contests between the Saxons and the Danes; the great battle which decided the fate of Simon de Montfort was fought in the vale of Evesham; and during the civil war Worcestershire was disturbed by frequent skirmishes. The battle which settled Cromwell in possession of the government was fought under the walls of the chief city. See **WORCESTER**.

Words of Command. Are certain terms which have been adopted for the exercise and movement of military bodies, according to the nature of each particular service. Words of command are classed under two principal heads, and consist of those which are given by the chief or commander of a brigade, or division, and of those which are uttered by the subordinate officers of troops or companies, etc. *Cautionary words*, are certain leading instructions which are given to designate any particular manœuvre. The cautionary words precede the words of command. See **COMMANDS**.

Working Party. A body of soldiers told off, by command, to perform certain work or labor foreign to their ordinary duties. The men generally receive additional pay while performing this labor.

Works. Are the fortifications about the body of a place. This word is also used to signify the approaches of the besiegers, and the several lines, trenches, etc., made round a place, an army, or the like, for its security.

Works, Advanced. See **ADVANCED WORKS**.

Works, Detached. See **DETACHED WORKS**.

Works, Field-. See **FIELD-WORKS**.

Worm. See **IMPLEMENTS**.

Worm a Gun, To. To take out the charge of a fire-arm by means of a worm.

Worms. A city of Western Germany, grand duchy of Hesse, near the left bank of the Rhine, 26 miles southeast of Mayence. This is one of the oldest, and in the early history of Germany was one of the most important, towns in the country. After its destruction by Attila the Hun about the middle of the 5th century, it was rebuilt by Clovis in 496. It afterwards became the seat of many Frankish and Carolingian kings. Worms was also the seat of many imperial diets, the best known of which is that of 1521, when Luther appeared before the emperor Charles V. In 1689 it was burned by order of Louis XIV.; and was taken by the French under Custine, October 4, 1792. Here, in 1743, an offensive and defensive alliance was entered into by Great Britain and Austria with Sardinia.

Worst, To. To defeat; to overthrow; to put to the rout.

Wörth. A village of Alsace, at the junction of the Sulzbach and the Sauerbach, is noted as the point where the first decisive encounter took place between the French and German armies, August 6, 1870. After storming Wissenbourg on August 4, 1870, the crown-prince of Prussia with the 8d army (about 120,000) marched rapidly forward and surprised part of the French army under Marshal MacMahon, including the corps of Canrobert and Faily (about 47,000), and defeated it in a long, desperate, and sanguinary engagement near this place. The battle lasted from 7 A.M. till 4 P.M. The chief struggles occurred in the country around Reichshoffen and in the village of Froeschweiler; the French are said to have charged the German line eleven times, each time breaking it, but always finding a fresh mass behind. The ridge on which Wörth stands was not captured until the French were taken in flank by the Bavarians and Württembergers. Nearly all MacMahon's staff were killed, and the marshal himself unhorsed, fell fainting into a ditch, from which he was rescued by a soldier. He then, on foot, directed the retreat towards Saverne, to cover the passes of the Vosges. The victory is attributed to the very great numerical superiority of the Germans (about 130,000) as well as to their excellent strategy. The French loss has been estimated at 20,000 killed and wounded, and about 6000 prisoners, 2 eagles, 6 mitrailleuses, 80 cannon, and much baggage. The Germans are stated to have had above 8000 men put *hors de combat*. It was admitted that MacMahon had acted as an able and brave commander.

Wounded, The. All the individuals belonging to an army who may have been maimed, or otherwise hurt in battle.

Wreath, Wreathed. In heraldry, a wreath is a twisted garland of silk of different colors, otherwise called a *torce*, on which it has, since the 14th century, been usual to place the crest. The side-view of a wreath exhibits six divisions, which are generally tintured with the living colors,—that is, the principal metal and color of the shield. Every crest is now understood to be placed upon a wreath, except when it is expressly stated to issue out of a *chapeau* or *coronet*. A wreath, when represented alone, shows its circular form. A Moor's head is sometimes encircled with a heraldic wreath. A wreath is always understood to be the twisted garland of silk above explained, unless otherwise specified; but wreaths of laurel, oak, ivy, etc., sometimes occur, and savages used as supporters are often wreathed about the head and middle with laurel. Ordinaries are occasionally wreathed, otherwise called *tortille*, in which case they are represented as if composed of two colors, twisted as in the heraldic wreath; as in the coat of Carmichael, argent, a fess wreathed azure and gules.

Wright-fuze. See **LABORATORY STORES.**
Wrong. To guard against injustice and oppression in the army, the Articles of War (see **APPENDIX, ARTICLES OF WAR**) clearly point out the mode of redress to every individual in the service, who considers himself wronged by his superiors.

Wrought Iron. See **ORDNANCE, METALS FOR.**

Württemberg, or Wirtemberg, Kingdom of. A state in the southwest of Germany, which was erected into a kingdom in 1806. It was originally part of Suabia, and was made a county for Ulric I., about 1265, and a duchy in 1495. Württemberg has been repeatedly traversed by hostile armies, particularly since the revolution of France. Moreau made his celebrated retreat October 28, 1796. This kingdom opposed Prussia in the war of 1866, but made peace on August 31, following. On November 5, 1870, it joined the other German states in the formation of the German empire.

Wyandot Indians. See **HURON INDIANS.**

Wyoming. A Territory of the United States, organized July 25, 1868, from a region attached to Dakota, but formerly included in Idaho, and still earlier known as part of Nebraska. Its average length from east to west is 855 miles, and its breadth 276 miles. This Territory has been overrun several times by hostile Indians, but under the strong hand of the military the country is becoming rapidly settled.

Wyoming Valley. A beautiful fertile valley on the Susquehanna River, in Pennsylvania. It is 21 miles long by 3 wide, and surrounded by mountains 1000 feet high. It was purchased about 1765 by a Connecticut company from the Delaware Indians; but the settlers were soon dispersed by hostile savages. In 1769, forty families came from Connecticut, but found a party of Pennsylvanians in possession, and for several years there were continual contests of the settlers with the Indians, and with each other. In 1776, the settlers armed for their own defense against the English and their Indian allies; but in 1778 most of their troops were called to join the army under Washington. On June 30, a force of 400 British provincials, or "Tories," and 700 Seneca Indians, led by Col. John Butler, entered the valley, and were opposed by 300 men, under Col. Zebulon Butler. On July 8, the settlers were driven to the shelter of Fort Forty (so called from the original number of families), with the loss of two-thirds of their number, many soldiers and inhabitants being murdered. On the 5th, the remnant of the troops surrendered, and they and the inhabitants were either massacred or driven from the valley, which was left a smoking solitude.

Wyvern. A fictitious monster of the Middle Ages, of frequent occurrence in heraldry. It resembles a dragon, but has only two legs and feet, which are like those of the eagle.

X.

Xanthica. A military festival observed by the Macedonians in the month called Xanthicus (our April), instituted about 892 B.C.

Xanthus. The most famous city of Lycia, stood on the western bank of the river of the same name, 60 stadia from its mouth. Twice in the course of its history it sustained sieges, which terminated in the self-destruction of the inhabitants with their property, first against the Persians under Harpagus, and long afterward against the Romans under Brutus. The city was never restored after its destruction by the latter.

Xeres de la Frontera. A town in the southwest of Spain, in the province of Cadiz, 14 miles northeast from Cadiz. At the battle of Xeres, July 19-26, 711, Roderic, the last Gothic sovereign of Spain, was defeated and slain by the Saracens, commanded by Tarik and Muza.

Ximena (Southern Spain). The site of a battle between the Spanish army under the command of Gen. Ballasteros, and the French corps commanded by Gen. Regnier, September 10, 1811. The Spaniards defeated their adversaries; the loss was great on both sides.

Y.

Yager. One belonging to a body of light infantry armed with rifles. Written also *jager*.

Yankton Indians. See DAKOTA INDIANS.

Yataghan. A Turkish poniard having a Damascus blade, straight or crooked. It has a double edge, and sharp point, with a ridge in the middle of its whole length; the handle and scabbard are generally highly ornamented and costly.

Yeomanry. A volunteer force of cavalry in Great Britain, numbering about 14,000 men, and costing the country annually about £85,000. It was originally formed during the wars of the French revolution, and then comprised infantry as well as cavalry; but the whole of the infantry corps, and many of the cavalry, were disbanded after the peace of 1814. The organization of the corps is by counties, under the lords-lieutenant. The men provide their own horses and uniform, in consideration of which they receive annually a clothing and contingent allowance of £2 a man, are exempt from taxation in respect to the horses employed on yeomanry duty, and draw during the annual training 2s. a day for forage, besides a subsistence allowance of 7s. a day. If called out for permanent duty they receive cavalry pay, with forage allowance. The yeomanry are available in aid of the civil power; and in time of invasion, or apprehended invasion, the sovereign may embody them for service in any part of Great Britain, under the provisions of the Mutiny Act and Articles of War.

Yeomen of the Guard. A veteran company, consisting of 100 old soldiers of stately presence, employed on grand occasions, in conjunction with the gentlemen-at-arms, as the body-guard of the sovereign. These yeomen were constituted a corps, in 1485, by King Henry VII., and they still wear the costume of that period. Armed with partisans, and in the quaint uniform, the men present a curious sight in the 19th century. The officers of the corps are a captain (ordinarily a peer), a lieutenant, and an ensign. There is also a "Clerk of the Cheque and Adjutant." All these appointments are held by old officers, and are considered as important prizes. The whole charge is borne by the sovereign's civil list. The headquarters of the corps is at the Tower of London, where the men are popularly known as "Beef-eaters."

Yermuk (Syria). Near here the emperor Heraclius was totally defeated by the Saracens, after a fierce engagement, November,

636. Damascus was taken, and his army was expelled from Syria.

Yesawul. In India, a state messenger; a servant of parade, who carries a gold or silver staff; an aide-de-camp.

York. The capital of Yorkshire, England, is situated at the junction of the rivers Ouse and Foss. Before the invasion of the Romans it formed one of the chief cities of the Brigantes, the most powerful of British tribes; and it is supposed that on their subjugation by Agricola, he founded here about the year 79 the Roman city of Eboracum, which became the great "Colonia" of the Romans in Britain, the seat of imperial government, and the "Altera Roma." On the departure of the Roman cohorts, about 409, it became a prey to the wars which prevailed between the Picts and the Britons, and between the latter and the Saxons; and also to the invasions of the Danes; but under these vicissitudes it still maintained its distinction as one of the chief cities of the kingdom. William the Conqueror was long unable to overcome this stronghold of the north. One Norman garrison, numbering 3000 men, was put to the sword in 1069; but William exacted a terrible vengeance in the following year, when he laid waste the whole country between York and Durham. During the insurrections consequent upon the dissolution of the monasteries by Henry VIII., York was seized by the insurgents of the "Pilgrimage of Greece"; and in its immediate neighborhood, Fairfax, in 1644, conquered Prince Rupert on Marston Moor; after which battle York was taken (July 16) for the Parliament.

York (Upper Canada, founded in 1794; since 1834 named Toronto). In the war between America and Great Britain, the U. S. forces made several attacks upon the province of Upper Canada, and succeeded in taking York, the seat of the government, April 27, 1813; but it was soon afterwards retaken by the British.

York and Lancaster, Wars of. See ROSES, WARS OF THE.

Yorkshire. The largest county of England, is situated in its northern part. The history of the county in early times may be mainly read in that of its chief city. In the troublous times which preceded the Conquest, many battles were fought against the invading Danes, and generally with success. At Stamford Brig, a few miles from York, Harold, the last of the Anglo-Saxon kings, defeated the united Danish and Norwegian armies, three weeks before he fell before the

Normans on the fatal field of Hastings. Among the more notable events of later history, may be named the battle of Wakefield, where the Duke of York was defeated by Queen Margaret in 1460; the battle of Towton Field, near Tadcaster, fought on Palm-Sunday in 1461, the most sanguinary conflict of the bitter war between the rival Roses; and that of Marston Moor, which gave the final blow to the falling fortunes of Charles I. Since that time, with slight exceptions, its history has been one of peace and prosperity.

Yorktown. Capital of York Co., Va., situated on the right bank of the York River, 70 miles from Richmond. This locality was the theatre of one of the most important events in American history,—the surrender of Lord Cornwallis to Gen. Washington, which occurred on October 19, 1781. Yorktown was besieged during the civil war in April, 1862, but before the Federals opened fire on the town, the Confederates evacuated it.

Youngsters. A familiar term to signify the junior officers of a troop or company.

Ypres, or Yperen. A fortified town of Belgium, province of West Flanders, 80

miles south-southwest from Bruges. Ypres in the 9th century, when only a strong castle, was destroyed by the Normans. It was rebuilt in 901; and was first walled in 1388. Louis XIV., in 1688, made it one of the strongest fortresses of the Low Countries. In the great European wars, it seldom escaped a siege or bombardment.

Yucatan. The most eastern department of Mexico, Central America. It is in the form of a peninsula, jutting out into the Gulf of Mexico. It was discovered in 1517, and conquered by Spain in 1541, and retained until 1821, when it became a department of Mexico. This department declared itself independent of Mexico in 1846, but it subsequently annexed itself to Mexico.

Yumas. A tribe of North American Indians, located on the Colorado River, near the village of Yuma. In 1781 they massacred a number of white settlers, and again in 1853 they rose and committed depredations. Since the latter date they have generally been peaceable. They numbered in 1876 about 900.

Yvres. Now Ivry-la-Bataille (which see).

Z.

Zabern, Rhein, or Rhein-Zabern. A town on the Erlenbach, in Rhenish Bavaria. It is noted for the two battles fought here and at the village of Jokgrin, about 2 miles farther south, between the Austrians and the French, June 29 and August 20, 1793.

Zagaie. A long dart or lance in use among some African tribes, particularly the Moors, while fighting on horseback. It is armed with a sharp stone and thrown like a javelin. The savages of New Holland are still armed with it.

Zaikany. A village of Austria, in Transylvania, 38 miles from Deva. It was here that Trajan won his third victory over Decebalus, a part of whose treasure was discovered, as it is supposed, in 1548.

Zaim. High caste among the Turks, who are bound to maintain a proportion of militia according to their revenue, viz., one horseman for every 5000 aspres.

Zama Regia. A strongly-fortified city in the interior of Numidia, on the borders of the Carthaginian territory. It was the ordinary residence of King Juba and was the scene of one of the most important battles in the history of the world, that in which Hannibal was defeated by Scipio, and the second Punic war was ended, 202 B.C.

Zamora. A very ancient town of Spain, of the province of that name, on the right

bank of the Douro, 182 miles northwest of Madrid. Zamora was of great importance in the Moorish times, and is said to have been inclosed by seven lines of walls, with a moat between each. Sir J. Moore urged the Junta of Salamanca to repair the defenses of Zamora, and receive there his stores; but his retreat had commenced before they had done deliberating. The French afterwards got possession of it, and although no resistance was made, the town was sacked, neither age nor sex was spared, and the principal persons were executed. It was again plundered by the French, and has never recovered these visitations.

Zamosc, or Zamosz. A town of Russia in Europe, in the kingdom of Poland, in the province of Lublin. This place is strongly fortified, and has long been considered a military station of importance. In 1656 it was unsuccessfully besieged by the Swedes; in 1715 it was surprised by the Saxons; and in the civil contests of 1771 the Poles were defeated in its vicinity by the Russians. In 1812 it was one of the few towns in which the French left a garrison after their retreat from Russia.

Zanzibar, or Zanguebar. An island in the Indian Ocean, near the east coast of Africa, belonging to the sultan of Zanzibar. In 1784 the island was taken by the imaum

of Muscat, in whose family the government remained until 1858.

Zaym. In the East Indies, a feudal chief, or military tenant.

Zeithun. A town and district in the highlands of Cilicia, inhabited by a community of Armenian Christians, virtually independent of the Turkish government, and forming in fact an Asiatic republic. The Zeithumlus can muster an army from 7000 to 8000 men to defend the mountains against the Turkish pashas; and they are in alliance with a neighboring Turcoman chief, also independent of the Turks, who brings 10,000 men into the field. It was not till after the Crimean war that the massacres in the East called special attention to the existence of Zeithun. An attempt by the Turks to settle Circassians near Zeithun, gave Aziz Pasha of Marash an opportunity of attacking the Christians, and the atrocities committed remind one of the worst excesses of Cawnpore. The inhabitants defended themselves, however, with the greatest gallantry, twice defeating in the field large Turkish forces; and the struggle was at length terminated by the interference of the French and English governments at Constantinople, and the recall of the pasha.

Zela, or Ziela. A city in the south of Pontus, not far south of Amasia, and four days' journey east of Tavium. It stood on an artificial hill, and was strongly fortified. At Zela the Roman general Valerius Triarius was defeated by Mithridates; but the city is more famous for another great battle,—that in which Julius Cæsar defeated Pharnaces, and of which he wrote this dispatch to Rome: *Veni: Vidi: Vici*.

Zenta, or Szenta. A town of Hungary, on the right bank of the Theiss, 120 miles south-southeast from Pesth. Near here Prince Eugène defeated the Turks, September 11, 1697 (1696). This victory led to the peace of Carlowitz, ratified January, 1699.

Zierikzee. A town of Holland, in the province of Zeeland, situated on the south-east of the island of Schouwen. It suffered severely in the contests between Flanders and Holland for the possession of Zeeland. In 1808, the Flemings besieged it with a large army, but were compelled by Count William of Holland to retire, on August 10, 1804. In the long war of independence, after an obstinate defense, the Spaniards took Zierikzee in July, 1876.

Zigzags. In fortification, are trenches or paths, with several windings, so cut that the besieged are prevented from enslaving the besieger in his approaches.

Ziyamat. In the East Indies, a fief bestowed for military services.

Zizarme. A sort of ancient pike or lance.

Znaym, or Znaim. A town of Austria, situated on the Thaya, 84 miles southwest from Brunn. A conflict took place here in 1809, between the Austrians and the French.

Zoaque. A soldier who had charge of an elephant among the ancients.

Zone of Defense. A term used in fortification, signifying the belt of ground in front of the general *contour* of the works within effective range of the defenders.

Zone of Operations. The strip of territory which contains the lines of operations—or lines on which an army advances—between the base and the ulterior object. See **STRATEGY**.

Zorndorf. A village of Prussia, province of Brandenburg, 4 miles north of Kustrin, and was the scene of the bloodiest of the many desperate conflicts of the Seven Years' War. The Russians having for the second time been ordered by the czarina Elizabeth to invade Prussia, advanced towards Berlin, committing frightful devastations, while Frederick the Great, with the bulk of his forces, was engaged with the Austrians in Silesia and Saxony. The Russians, under Fermor, were 50,000 strong, and easily drove before them Dohna's little Prussian army of 15,000; but Frederick hastened northwards with such reinforcements as raised the army to 80,000; and after taking care, by the breaking down of bridges, etc., to cut off their retreat, engaged the invaders. The battle was commenced at eight on the morning of August 25, 1758, and lasted till evening, consisted mainly in a succession of furious charges, accompanied with a tremendous artillery-fire, and was not decided till Seidlitz, by an able movement, turned the Russian flank. The next morning Fermor drew off his forces, diminished by 20,000 men, 108 cannon, and 27 standards; having inflicted on the Prussians a loss of 13,000 men, 26 cannon, and a few standards.

Zouaves (Arab. *Zuawwa*). A body of troops in the French army, which derives its name from a tribe of Kabyles, inhabiting the mountains of Jurjura, in the Algerian province of Constantine. Long previous to the invasion of Algiers by the French, these Kabyles had been employed as hired mercenaries in the service of the rulers of Tripoli, Tunis, and Algiers; and after the conquest of the last-named country in 1830, the French, in the hope of establishing a friendly feeling between the natives and their conquerors, took the late dey's mercenaries into their service, giving them a new organization. Accordingly, Gen. Clausel created, in 1830, two battalions of zouaves, in which each company consisted of French and Kabyles in certain proportions, officers, subalterns, and soldiers being selected from either race; the zouaves, though retaining their Moorish dress, were armed and disciplined after the European fashion; and the battalions were recruited by voluntary enlistment. Afterwards the native element was eliminated, and since 1840 they may be considered as French troops in a Moorish dress. They now number about 15,000, and are divided into four regiments. They are recruited from the veterans of the ordinary infantry regiments who are distinguished for their fine "physique" and tried courage and hardi-

hood. Their uniform is very picturesque. There is one regiment of zouaves incorporated in the Guards. The name was also given to several regiments of volunteers in the Union army during the American civil war (1861-65), who were clad in zouave uniform.

Zullichau (Prussia). Here the Russians under Soltikow severely defeated the Prussians under Wedel, July 28, 1759.

Zululand. The country lying northeast of the colony of Natal, between its east boundary, the Umtugela and Umzimyati Rivers, lat. 29° 10' E., and Delagoa Bay, lat. 26° S., long. 82° 40' E., is generally known under the name of Zululand, or the Zulu country, inhabited by independent tribes of Zulu Kaffirs. The Zulu is by nature social, light of heart, and cheerful; his passions are, however, strong, and called out when in a state of war. He is hospitable and honest, yet greedy and stingy; and whatever the better nature of his impulses may be, yet when his great chief commands war, he is converted into a demon. It is from the Zulu country, however, that those terrible tyrants who so long devastated Southeastern Africa, the chiefs Chaka, Dingaan, Moselikatze, etc., issued. The training of their subjects to a peculiar mode of warfare spread desolation and havoc for many years among the Betjuana and other tribes of the interior. These chiefs with their thousands of followers, fighting, like Homer's heroes, hand to hand, armed with stabbing assegais and shields of ox-hide, the colors of which distinguished the different regiments they were formed into, melted away with broken power into comparative insignificance before the terrible rifles of a few hundred emigrant Dutch Boers, who, in their turn, gave way to the energetic action of the British authorities. The Zulus often have serious intestine wars among themselves. The principal Zulu tribes are the Amazulu, the Amahute, Amawazi, and Amatabele. The last, under the chief Moselikatze, have emigrated far to the north, where, among the mountains which separate the valley of the Limpopo from the basin of the Zambesi, they still issue forth, and carry their depredations as far north as the Lake Nyassa, where they were found by Dr. Livingstone. A war broke out in the latter part of 1878, or beginning of 1879, between the British and the Zulus, and on January 22, 1879, the British were defeated with terrible slaughter about 10 miles in front of Rorke's drift; their loss in killed being put down at 80 officers, about 500 enlisted men of the Imperial troops, and 700 enlisted men of the Colonial troops. It seems that the troops were enticed away from their camp, as the action took place about one mile and a quarter from it. The camp containing surplus ammunition, etc., of the British force was taken by the Zulus, but was occupied after dark the same night by British troops. About the same time Rorke's drift was

attacked by some 8000 or 4000 Zulus; its defense by some 80 men of the 24th Regiment was most gallant, 370 bodies lay close around the post; the loss of the Zulus was estimated at 1000 here alone. At the camp where the disaster occurred, the loss of the Zulus was computed at over 2000. The Zulus are even more formidable than the military authorities expected; they are well drilled, great numbers are armed with breech-loaders, and they fight courageously. It is now known but too well how large a force they can mass at one point. Lord Chelmsford, the commander of the English forces in Zululand, after suffering some additional reverses, was superseded in June, 1879, by Sir Garnet Wolesley. Eugene Louis Jean Napoleon, prince imperial of France, participated as a volunteer with the British forces against the Zulus, and was killed (about the end of May or the beginning of June) while on a reconnaissance under the command of Col. Wood; he was suddenly beset by Zulus and assailed, receiving no less than seventeen wounds. Prince Napoleon was born in Paris on March 16, 1856. He received his "Baptism of Fire" at the battle of Saarbruck, August 2, 1870, during the Franco-German war, in company with his father, the emperor. After the fall of the empire and the death of his father he resided in England, and graduated with high honors at the Military Academy at Woolwich. The war was terminated in the latter part of 1879, by the total defeat of the Zulus and the capture of the king Cetawayo.

Zumbooruks (Pers. *Zumboor*, "wasp"). Diminutive swivel artillery, carried on the backs of camels.

Zurich. A town of Switzerland, capital of the canton of the same name, at the northern extremity of the Lake of Zürich, 60 miles northeast from Berne. The Swiss defeated the Austrians near this town in 1443, and in 1799 the French defeated the Russians and Austrians before it. In 1859 a treaty between Austria, France, and Sardinia was signed here, and Lombardy sold by Austria to the king of Sardinia for £10,000,000.

Zutphen. An inland town of Holland, in the province of Gelderland, on the Yssel, 16 miles northeast from Arnheim. It is fortified and rendered peculiarly strong by its situation, which is in the midst of drained fens. It formerly belonged to the Hanseatic League, and was taken by Don Frederick of Toledo in 1572; by Prince Maurice in 1591; and by the French in 1672. The gallant and accomplished Sir Philip Sidney, author of "Arcadia," was mortally wounded in the battle fought here on September 22, 1586, between the Spaniards and the Dutch. He was serving with the English auxiliaries, commanded by the Earl of Leicester.

Zuyper Sluys (Holland). Here Sir Ralph Abercromby defeated an attack of the French under Brune, September 9, 1799.

APPENDIX.

EMBRACING WORDS CASUALLY OMITTED IN THE BODY OF THE WORK,
AND THE ARTICLES OF WAR.

A.

Acanzi. In military history, the name of the Turkish light-horse who formed the vanguard of the sultan's army.

Adoni, or Adonani. A city in Hindostan, formerly strongly fortified; captured by Tippoo Sahib in 1787; sold to England after his death in 1800.

Afabuar (Fr.). Color-bearer of the ancient Icelanders. Every war-vessel had one of these officers aboard, who commanded the soldiers. These officers were selected for this duty for their bravery.

Alains (Fr.). People of ancient Sarmatia; they followed the Huns in their invasions, and penetrated as far as Spain in the 6th century.

Alexandria. A port in Egypt, where, on March 21, 1801, the French army destined by Napoleon Bonaparte to conquer Egypt, and afterwards proceed to India with hostile designs, was routed by the British under Sir Ralph Abercromby. The town capitulated to Hutchinson on September 2, 1801; and surrendered upon a subsequent occasion to Gen. Fraser, on March 20, 1807.

Allezoir. A frame of timber firmly suspended in the air with strong cordage, on which is placed a piece of ordnance with the muzzle downwards. In this situation the bore is rounded and enlarged by means of an instrument which has a very sharp and strong edge made to traverse the bore by force of machinery, or horses, and in a horizontal direction.

Allezures. The metal taken from the cannon by boring.

Ancient. A term formerly used to express the grand ensign or standard of an army.

Anspessade (Fr.). This term was originally used to denote dismounted horsemen, who were obliged to serve temporarily in the infantry, and who broke off the tops of their lances so as to reduce their length to that of the halberds of the sergeants. Also, a non-commissioned officer who acts subordinate to a corporal; a lance-corporal.

Antoninus, Wall of. Was a rampart or

defense (the remains of which still exist under the name of *Graham's Dyke*), which was erected in Scotland in 189 by the Romans against the incursions of the North Britons.

Aquileia (Istria). Made a Roman colony about 180 B.C., and fortified A.D. 168. Constantine II. was slain in a battle with Constantians, fought at Aquileia towards the close of March, 340. Maximus was defeated and slain by Theodosius, near Aquileia, July 28, 388. Theodosius defeated Eugenius and Arbogastes, the Gaul, near Aquileia, and remained sole emperor, September 6, 394. Eugenius was put to death, and Arbogastes died by his own hand, mortified by his overthrow. In 452 Aquileia was almost totally destroyed by Attila the Hun, and near it in 489 Theodoric and the Ostrogoths totally defeated Odoacer, the king of Italy.

Auberoche, Guienne. In Southern France. The Earl of Derby defeated the French, besieging this place, August 19, 1844.

Auray (Northwest France). Here on September 29, 1384, the English under John Chandos defeated the French and captured their leader, Du Guesclin. Charles of Blois, made duke of Brittany by the king of France, was slain, and a peace was made in April, 1385.

B.

Band, Military.* Consists of a body of musicians attached to each army regiment or battalion. The law provides for a band at the Military Academy at West Point. And for each artillery, cavalry, and infantry regiment a chief musician, who shall be instructor of music; and for each artillery and infantry regiment two principal musicians; each cavalry regiment to have one chief trumpeter. Musicians for regimental bands are enlisted as soldiers, and formed under the direction of the adjutant, but are not permanently detached from their companies, and are instructed in all the duties of a soldier.

* Incorrectly printed in the body of the work.

Bander (*Fr.*). To unite; to intrigue together for the purpose of insurrection.

Barry. In heraldry, the term applied to a shield which is divided transversely into four, six, or more equal parts, and consisting of two or more tinctures interchangeably disposed. *Barry-bendy* is where the shield is divided into four, six, or more equal parts, by diagonal lines, the tincture of which it consists being varied interchangeably. *Barry-pily* is where the shield is divided by diagonal lines, the different colors being interchanged.

Bassinot (*Fr.*). The pan of a musket.

Bautzen. A town in Saxony, near which desperate battles were fought May 20-22, 1818, between the French, commanded by Napoleon, and the allies under the emperor of Russia and the king of Prussia. The struggle commenced on the 19th, with a contest on the outposts, which cost each army a loss of above 2000 men. On the 20th (at Bautzen), the French were more successful; and on the 21st (at Murschen), the allies were compelled to retire; but Napoleon obtained no permanent advantages from these sanguinary engagements. Duroc was killed at Rachenbach by a cannon-ball on May 22, to the great sorrow of the emperor and the French army.

Beaver, or **Bever**. That part of a helmet covering the lower part of the face, which shifted on pivots to allow the wearer to drink. The word is derived from the Latin word *bevere*, to drink.

Bethune. A town of France, in the department Pas-de-Calais; it is strongly fortified, part of the works and the citadel having been constructed by Vauban; taken by the French in 1645; retaken by the allies in 1710, but was restored to France by the treaty of Utrecht, 1714.

Biset (*Fr.*). Was a member of the national guard who performed his duty in civilian's dress, before the wearing of uniform on duty was made obligatory.

Blackstock's Hill. A hill situated in South Carolina, United States, memorable for the victory the Americans gained over the English in 1780.

Blakemere. A village of England, near where a memorable battle was fought between the Scots and the troops of Edward II. of England, in which the latter were defeated.

Blumenau. In Lower Austria; on July 22, 1866, the Austrians in possession of this place were attacked by the Prussians on their march towards Vienna, a severe conflict was interrupted by the news of the armistice agreed to at Nikolsburg; and the same evening Austrians and Prussians bivouacked together.

Brabant. Part of Holland and Belgium, an ancient duchy, part of Charlemagne's empire, fell to the share of his son Charles. In the 17th century it was held by Holland and Austria, as Dutch Brabant and the Walloon provinces, and underwent many

changes through the wars in Europe. The Austrian division was taken by the French in 1746 and 1794. It was united to the Netherlands in 1814, but South Brabant was given to the kingdom of Belgium, under Leopold, 1830. The heir of the throne of Belgium is styled Duke of Brabant.

Braquemart, or **Jacquemart** (*Fr.*). In antiquity, a two-edged broadsword.

Breda. A strongly fortified town of Holland; taken by Prince Maurice of Nassau in 1590; by the Spaniards under Spinola in 1625, and by the Dutch in 1687; taken by the French in 1793. The French garrison was expelled by the burgesses in 1813.

Briche (*Fr.*). A machine of war formerly used to throw stones.

Broad Arrow. A mark for goods belonging to the royal dock-yards or navy, England; is said to have been ordered to be used in 1698, in consequence of robberies.

Brussels. Once capital of Austrian Brabant, now of Belgium (since 1831), was founded by St. Gery, of Cambrai, in the 7th century. It was bombarded and captured by Marshal Villeroi in 1695; taken by the French in 1701 at the beginning of the War of Succession; captured by the Duke of Marlborough in 1706; by the French under Marshal Saxe in 1747, and by Gen. Dumouriez in 1794; the revolution commenced in 1830.

C.

Cabacle (*Fr.*). Military coat of the modern Grecians.

Cabas (*Fr.*). A large shield or buckler, which served to protect the archers who attacked in intrenchments.

Cage de la Bascule (*Fr.*). A space into which one part of a draw-bridge falls, whilst the other rises and conceals the gate.

Calosiers. Soldiers of ancient Egypt, who with the *Hermotybes* composed the particular guard of the king.

Calotte (*Fr.*). The back plate of a sword-handle; the cap of a pistol; species of skull-cap worn by French cavalry, sabre-proof, made of iron or dressed leather.

Candjia, or **Canjar**. A kind of crooked Turkish sabre.

Carcas (*Fr.*). The name given to a quiver during the Middle Ages.

Chadd's Ford. A village in Delaware Co., Pa., on the Brandywine Creek. Near here was fought the battle of Brandywine, September 11, 1777.

Charlestown. A former city and seaport of Middlesex Co., Mass.; is now a northern suburb of Boston. Was burnt by the British forces under Gen. Gage, June 17, 1775. On Bunker's Hill a monument is erected commemorating the battle of that name, which was fought June 17, 1775.

Charlestown. A village of Jefferson Co., West Va. In this place John Brown was tried and executed, December, 1859. On October 18, 1863, a Confederate force of 1200 or 1400 men, under Gen. Imboden, sur-

rounded the place at daylight, and attacked the Union troops stationed there. Being surprised, they were panic-stricken, and, flying in confusion, were nearly all captured. The place was recaptured within an hour by a force of U. S. troops under Col. George D. Wells, and the Confederates driven from the town.

Chateau Cambresis. A fortified town of French Flanders, on the Selle, where the French republican army was defeated by the Duke of York in April, 1794.

Cherry Valley. A village of Otsego Co., N. Y. It was the scene of a dreadful massacre by the Tories and Indians in the British service, October 11, 1778. Thirty-two inhabitants, nearly all women and children, were murdered, besides sixteen soldiers of the Continental army. The rest of the citizens were made prisoners and taken away, and all the buildings were burned.

Chickasaw Bluffs, Battle of. Before Vicksburg, Miss. The U. S. forces under Gen. W. T. Sherman assaulted this strongly fortified position, December 29, 1862, but, though the head of the assaulting column reached the works, the severe fire from the rifle-pits and batteries caused them to fall back to the point of starting, leaving many dead, wounded, and prisoners on the field. The Confederate loss was but light.

Clipeadus. So were called, in ancient times, the soldiers who were armed with the Grecian buckler, which was large and round. By *clipeadus chlamyde* was understood combatants, who, in place of the shield, wound their coats (chlamyde) around their left arms.

Clunaculum. A poniard carried by certain Roman troops in ancient times. It was so called because it was carried on the back of the soldier.

Cnemidas. A kind of leggings, made of bronze, which were worn by Grecian soldiers.

Cnidos (now Crio). A town of Anatolia, in Asia Minor; in its neighborhood a battle was fought between the Lacedæmonian and Persian fleets in 894 B.C.; the latter gained the victory.

Colismarde (Fr.). A long, slender sword.

Colletin (Fr.). So was called, in ancient times, that part of an armor which protected the neck and upper part of the breast.

Custoza. Near Verona, Northern Italy. Here the Italians were defeated by Marshal Radetzky, July 28, 1848; and here they were again defeated, June 24, 1866, after a series of desperate attacks on the Austrian army. The Italians were commanded by their king, Victor Emmanuel, and the Austrians by the Archduke Albrecht.

D.

Dauids Island. An island of 100 acres in Long Island Sound, within the township limits of New Rochelle, Westchester Co., N. Y. It was purchased in 1867 by the

U. S. government, to be used for military purposes.

Dinkelsbuhl. A town of Bavaria, surrounded with a high wall, flanked with towers and ditches. It suffered much during the Thirty Years' War.

Doryleum (Phrygia). Soliman, the Turkish sultan of Iconium, having retired from the defense of Nicæa, his capital, was here defeated with great loss by the Crusaders, July 1, 1097.

Douglas. An ancient noble family of Scotland. The earls of Douglas, the earls of Angus, and the earls of Morton belonged to this family. Sir James Douglas, surnamed "The Good," was the founder of their fame and grandeur. He commanded the left wing at Bannockburn in 1314, and was killed by the Saracens in Spain about 1330, in a pilgrimage to Palestine. James the second, earl of Douglas, was a famous warrior, and was killed at the battle of Otterburn in 1388. Archibald the Grim, third earl, fought for the French at Poitiers, and died about 1400. He was succeeded by his son Archibald, fourth earl, who displayed great courage at the battle of Shrewsbury (1403), where he fought against Henry IV., and rendered important services to Charles VII. of France, who rewarded him with the duchy of Touraine. He was killed at the battle of Verneuil, in France, in 1424.

Dry Tortugas. A group of ten small, low, barren islands belonging to Monroe Co., Fla. These islands served as a place of imprisonment for persons under sentence by courts-martial during the late civil war. Several criminals concerned in the conspiracy in which President Lincoln was murdered were confined here.

E.

Egard (Fr.). An ancient tribunal of Malta which decided, by commission, suits among the knights.

Eleasa. In Palestine; here Judas Maccabæus was defeated and slain by Bacchides and Alcimus, and the Syrians about 161 B.C.

Entrenchments. The field-works which are hastily thrown up to cover a force in position.

Erivan, Irvin, or Irvan. A fortified town of Russian Armenia, situated on the Zenghi. It was taken by the Turks in 1553 and 1582, but recovered by Abbas the Great, 1604; after being several times captured, it was ceded to Persia, 1769. The Russians blockaded this place during six months in 1808, and were repulsed, with great slaughter, in an attempt to storm it. In 1827, however, it was taken by them.

Ermin. An order of knights instituted in 1450, by Francis I., duke of Bretagne, and which formerly subsisted in France. The collar of this order was of gold, composed of ears of corn in saltire, at the end of which hung the ermine, with the in-

scription *a ma vie*. But the order expired when the dukedom of Bretagne was annexed to France.

Errouad, or Erroad. A town of Hindoetan, in the province of Coimbatour. This town was reduced in size during the reign of Tippoo Sahib; and during the invasion of Gen. Meadows the town was destroyed. It was taken by the British in 1790, and retaken by Tippoo; but it came into the final possession of the British, along with the province, in 1799.

Evans Rifle. See MAGAZINE GUNS.

F.

Fabian. Delaying; dilatory; avoiding battle, in imitation of Quintus Fabius Maximus Verrucosus, a Roman general who conducted military operations against Hannibal, by declining to risk a battle in the open field, but harassing the enemy by marches, counter-marches, and ambuscades.

G.

Gad. The first-born of Zilpah, Leah's maid, was the seventh son of Jacob. The tribe of Gad numbered in the wilderness of Sinai more than 40,000 fighting-men. Nomadic by nature, they preferred to remain on the east side of Jordan, and were reluctantly allowed to do so by Joshua, on condition of assisting their countrymen in the conquest and subjugation of Canaan. The men of Gad—if we may judge from the eleven warriors who joined David in his extremity—were a race of stalwart heroes; "men of might, and men of war, fit for the battle, that could handle shield and buckler, whose faces were like the faces of lions, and were as swift as the roes upon the mountains."

Gomer Chamber. Chamber of the 24-pounder Coehorn mortar; it is in the form of a frustum of a cone, superior diameter 8 inches, and inferior, 2 inches.

Gore. In heraldry, a charge consisting of one-third of the shield cut off by two arched lines, one drawn from the dexter or sinister chief, and the other from the bottom of the escutcheon, meeting in the fees point. A *gore sinister* is enumerated by heralds as one of the abatements or marks of dishonor borne for unknighly conduct. See GUSSET.

Gueif, Guelph, or Welf. The name of a noble family in Germany, the founder of which lived in the time of Charlemagne.

H.

Half Merlons. The merlons at the ends of the parapet.

Harrow. In a military sense, means to lay waste; to ravage; to destroy.

Here. Is a word used by soldiers at a regimental roll-call, to intimate their presence.

M.

Magnano. In Northern Italy; here Scherer and a French army were defeated by the Austrians under Kray, April 5, 1799.

Mars. The name of the Roman god of war, was a contraction of *Mavors*. He was supposed to be a son of Jupiter and Juno, and was identified with the Ares of Greek mythology. According to Ovid he was a son of Juno, but had no father. Homer and other poets relate that Mars fought for the Trojans at the siege of Troy, and was wounded by Diomedes. Mars was believed to love war for its own sake, and to delight in carnage. He is usually represented as a grim soldier in full armor,—sometimes as driving furiously in a war-chariot.

Moliones, or Molionides. Regarded as the sons of Neptune (Poseidon); according to Homer the Moliones, when yet boys, took part in an expedition of the Epeans against Neleus and the Pylians. When Hercules marched against Augeas, the latter intrusted the conduct of the war to the Moliones; but as Hercules was taken ill, he concluded peace with Augeas, whereupon his army was attacked and defeated by the Molionides. In order to take vengeance, he afterwards slew them near Cleonsæ, on the frontiers of Argolis. Their sons, Amphimachus and Thaliplus, led the Epeans to Troy.

N.

Nugent. The name of a noble family, originally from Normandy, who settled in Ireland in the 12th century. Richard Nugent was created by King James I. earl of Westmeath in 1621. George Thomas John Nugent, born in 1785, became marquis of Westmeath in 1822. Sir George Nugent, grandson of Viscount Clare, born in 1757, served in America and the Netherlands. He was successively appointed governor of Jamaica and commander-in-chief of the army in the West Indies, and in 1846 field-marshal. Died in 1849. His brother, Sir Charles Edmund Nugent, served with distinction under Rodney, and was created admiral of the blue in 1808. In 1833 he received the title of admiral of the fleet. Died in 1844.

P.

Paneas, or Panias (Syria). Here Antiochus the Great defeated Scopas, the Egyptian general, and his Greek allies, 198 B.C.

Percy. The name of an ancient and noble English family, descended from William de Percy, who, in the reign of William the Conqueror, possessed several manors in the counties of Lincoln and York. He was probably a Norman. In the reign of Edward I. a Henry de Percy acquired Alnwick and other estates in Northumberland. Another Henry de Percy, in the reign of Edward III., married Mary Plantagenet, a great-

granddaughter of King Henry III., and had two sons, Henry, earl of Northumberland, and Thomas, earl of Worcester. Henry Percy, surnamed Hotspur, a son of Henry last named, rebelled against Henry IV., and was killed at the battle of Shrewsbury (1403). A son of Hotspur was restored to the earldom, fought for the house of Lancaster, and fell at Saint Albans, in 1455, leaving several sons, who were killed in the war of the Roses. In the reign of Elizabeth, a Percy, earl of Northumberland, was executed for rebellion (1572).

Pharaoh. The term applied in the Bible to the kings of Egypt, of which many explanations have been proposed, as *pa-ra*, "the sun;" *pi-ouro*, "the king;" *per-aa*, "the great house," "court;" *pa-ra-anh*, or "the living sun." None of these etymologies are altogether satisfactory, some not being found at an early period. It is still less possible to connect it with the name of any Egyptian monarch, and it must have been a common appellation like *khan*, *caesar*, or *czar*. Pharaoh is the one under whom the Israelites were in bondage, and who compelled them to build the treasure-cities of Pithom and Rameses of bricks; and it was under him or his successor that Egypt was afflicted with the ten plagues, and that Moses and Aaron led the Israelites out of Egypt, and the Egyptian army in its pursuit of the retreating Israelites was drowned in the sea, although it is doubtful if Pharaoh perished with them. The identical Egyptian monarch who was the Pharaoh of the Exodus has been a subject of dispute, but it is principally confined to the period of the eighteenth and nineteenth dynasties. The other Pharaohs mentioned in the Bible are the father of Hadad the Edomite, supposed to be a king of the twenty-second dynasty; the father-in-law of Solomon; one of the predecessors of Sheshanka or Shishak; that monarch himself, who overran the Holy Land and pillaged Jerusalem; Tirhakah the Ethiopian, who for a time wrested Egypt from the Assyrians; Nekau or Necho II., who in-

vaded Palestine to reduce it to subjection, then in alliance with the Assyrians, but was finally defeated at Carchemish by Nebuchadnezzar, then at a youthful age, 605 B.C.; and Uah-pa-ra, Hophra or Apries, of the twenty-sixth dynasty, who marched to relieve the siege of Jerusalem, causing the Babylonians to retire for a while, although it was finally taken by Nebuchadnezzar, 588 B.C. It is remarkable that the Ethiopian Kings Zerah and so mentioned in the Bible are not styled Pharaohs, like the Egyptian rulers, as if for some reason they had not the same title or were recognized as lawful rulers of the country.

Phylarque (Fr.). A Grecian cavalry officer who commanded the cavalry of his tribe.

R.

Reichenbach (Prussia). Here was signed a subsidy treaty between Russia, Prussia, and England, whereby the last engaged to provide means for carrying on the war against Napoleon I. on certain conditions, June 14-15, 1813. Austria joined the alliance soon after. Here Duroc was killed during the conflicts between the French and the allies, May 22, 1813.

S.

Shako. A kind of military cap.

T.

Tesserae Militares. Military watchwords, or countersigns, among the ancient Romans.

V.

Viana. A town of Portugal, in the province of Minho, situated on the Lima, 88 miles north from Oporto. This place surrendered to Admiral Sir Charles Napier in the civil war which deprived Don Miguel of the throne of Portugal.

ARTICLES OF WAR.

SECTION 1842. The armies of the United States shall be governed by the following rules and articles. The word officer, as used therein, shall be understood to designate commissioned officers; the word soldier shall be understood to include non-commissioned officers, musicians, artificers, and privates, and other enlisted men, and the convictions mentioned therein shall be understood to be convictions by court-martial.

ARTICLE 1. Every officer now in the

Army of the United States shall, within six months from the passing of this act, and every officer hereafter appointed shall, before he enters upon the duties of his office, subscribe these rules and articles.

ART. 2. These rules and articles shall be read to every enlisted man at the time of, or within six days after, his enlistment, and he shall thereupon take an oath or affirmation, in the following form: "I, A B, do solemnly swear (or affirm) that I will bear

true faith and allegiance to the United States of America; that I will serve them honestly and faithfully against all their enemies whomsoever; and that I will obey the orders of the President of the United States, and the orders of the officers appointed over me, according to the Rules and Articles of War." This oath may be taken before any commissioned officer of the Army.

ART. 3. Every officer who knowingly enlists or musters into the military service any minor over the age of sixteen years without the written consent of his parents or guardians, or any minor under the age of sixteen years, or any insane or intoxicated persons, or any deserter from the military or naval service of the United States, or any person who has been convicted of any infamous criminal offense, shall, upon conviction, be dismissed from the service, or suffer such other punishment as a court-martial may direct.

ART. 4. No enlisted man, duly sworn, shall be discharged from the service without a discharge in writing, signed by a field-officer of the regiment to which he belongs, or by the commanding officer, when no field-officer is present; and no discharge shall be given to any enlisted man before his term of service has expired, except by order of the President, the Secretary of War, the commanding officer of a department, or by sentence of a general court-martial.

ART. 5. Any officer who knowingly musters as a soldier a person who is not a soldier shall be deemed guilty of knowingly making a false muster, and punished accordingly.

ART. 6. Any officer who takes money, or other thing, by way of gratification, on mustering any regiment, troop, battery, or company, or on signing muster-rolls, shall be dismissed from the service, and shall thereby be disabled to hold any office or employment in the service of the United States.

ART. 7. Every officer commanding a regiment, an independent troop, battery, or company, or a garrison, shall, in the beginning of every month, transmit through the proper channels, to the Department of War, an exact return of the same, specifying the names of the officers then absent from their posts, with the reasons for and the time of their absence. And any officer who, through neglect or design, omits to send such returns, shall, on conviction thereof, be punished as a court-martial may direct.

ART. 8. Every officer who knowingly makes a false return to the Department of War, or to any of his superior officers, authorized to call for such returns, of the state of the regiment, troop or company, or garrison under his command; or of the arms, ammunition, clothing, or other stores thereunto belonging, shall, on conviction thereof before a court-martial, be cashiered.

ART. 9. All public stores taken from the enemy shall be secured for the service of the United States; and for neglect thereof the commanding officer shall be answerable.

ART. 10. Every officer commanding a troop, battery, or company, is charged with the arms, accoutrements, ammunition, clothing, or other military stores belonging to his command, and is accountable to his colonel in case of their being lost, spoiled, or damaged otherwise than by unavoidable accident, or on actual service.

ART. 11. Every officer commanding a regiment or an independent troop, battery, or company, not in the field, may, when actually quartered with such command, grant furloughs to the enlisted men, in such numbers and for such time as he shall deem consistent with the good of the service. Every officer commanding a regiment, or an independent troop, battery, or company, in the field, may grant furloughs not exceeding thirty days at one time, to five per centum of the enlisted men, for good conduct in the line of duty, but subject to the approval of the commander of the forces of which said enlisted men form a part. Every company officer of a regiment, commanding any troop, battery, or company not in the field, or commanding in any garrison, fort, post, or barrack, may, in the absence of his field-officer, grant furloughs to the enlisted men, for a time not exceeding twenty days in six months, and not to more than two persons to be absent at the same time.

ART. 12. At every muster of a regiment, troop, battery, or company, the commanding officer thereof shall give to the mustering officer certificates, signed by himself, stating how long absent officers have been absent and the reasons of their absence. And the commanding officer of every troop, battery, or company shall give like certificates, stating how long absent non-commissioned officers and private soldiers have been absent and the reasons of their absence. Such reasons and time of absence shall be inserted in the muster-rolls opposite the names of the respective absent officers and soldiers; and the certificates, together with the muster-rolls, shall be transmitted by the mustering officer to the Department of War, as speedily as the distance of the place and muster will admit.

ART. 13. Every officer who signs a false certificate, relating to the absence or pay of an officer or soldier, shall be dismissed from the service.

ART. 14. Any officer who knowingly makes a false muster of man or horse, or who signs, or directs, or allows the signing of any muster-roll, knowing the same to contain a false muster, shall, upon proof thereof by two witnesses, before a court-martial, be dismissed from the service, and shall thereby be disabled to hold any office or employment in the service of the United States.

ART. 15. Any officer who, willfully or

through neglect, suffers to be lost, spoiled, or damaged, any military stores belonging to the United States, shall make good the loss or damage, and be dismissed from the service.

ART. 16. Any enlisted man who sells, or willfully or through neglect wastes the ammunition delivered out to him, shall be punished as a court-martial may direct.

ART. 17. Any soldier who sells or, through neglect, loses or spoils his horse, arms, clothing, or accoutrements, shall suffer such stoppages, not exceeding one-half of his current pay, as a court-martial may deem sufficient for repairing the loss or damage, and shall be punished by confinement or such other corporal punishment as the court may direct.

ART. 18. Any officer commanding in any garrison, fort, or barracks of the United States who, for his private advantage, lays any duty or imposition upon, or is interested in, the sale of any victuals, liquors, or other necessities of life, brought into such garrison, fort, or barracks, for the use of the soldiers, shall be dismissed from the service.

ART. 19. Any officer who uses contemptuous or disrespectful words against the President, the Vice-President, the Congress of the United States, or the chief magistrate or legislature of any of the United States in which he is quartered, shall be dismissed from the service, or otherwise punished as a court-martial may direct. Any soldier who so offends shall be punished as a court-martial may direct.

ART. 20. Any officer or soldier who behaves himself with disrespect towards his commanding officer shall be punished as a court-martial may direct.

ART. 21. Any officer or soldier who, on any pretense whatsoever, strikes his superior officer, or draws or lifts up any weapon, or offers any violence against him, being in the execution of his office, or disobeys any lawful command of his superior officer, shall suffer death, or such other punishment as a court-martial may direct.

ART. 22. Any officer or soldier who begins, excites, causes, or joins in any mutiny or sedition, in any troop, battery, company, party, post, detachment, or guard, shall suffer death, or such other punishment as a court-martial may direct.

ART. 23. Any officer or soldier who, being present at any mutiny or sedition, does not use his utmost endeavor to suppress the same, or having knowledge of any intended mutiny or sedition, does not, without delay, give information thereof to his commanding officer, shall suffer death, or such other punishment as a court-martial may direct.

ART. 24. All officers, of what condition soever, have power to part and quell all quarrels, frays, and disorders, whether among persons belonging to his own or to another corps, regiment, troop, battery, or

company, and to order officers into arrest, and non-commissioned officers and soldiers into confinement, who take part in the same, until their proper superior officer is acquainted therewith. And whosoever, being so ordered, refuses to obey such officer or non-commissioned officer, or draws a weapon upon him, shall be punished as a court-martial may direct.

ART. 25. No officer or soldier shall use any reproachful or provoking speeches or gestures to another. Any officer who so offends shall be put in arrest. Any soldier who so offends shall be confined, and required to ask pardon of the party offended, in the presence of the commanding officer.

ART. 26. No officer or soldier shall send a challenge to another officer or soldier to fight a duel, or accept a challenge so sent. Any officer who so offends shall be dismissed from the service. Any soldier who so offends shall suffer such corporal punishment as a court-martial may direct.

ART. 27. Any officer or non-commissioned officer, commanding a guard, who, knowingly and willingly, suffers any person to go forth to fight a duel, shall be punished as a challenger; and all seconds or promoters of duels, and carriers of challenges to fight duels, shall be deemed principals, and punished accordingly. It shall be the duty of any officer commanding an army, regiment, troop, battery, company, post, or detachment, who knows or has reason to believe that a challenge has been given or accepted by any officer or enlisted man under his command, immediately to arrest the offender and bring him to trial.

ART. 28. Any officer or soldier who upbraids another officer or soldier for refusing a challenge shall himself be punished as a challenger; and all officers and soldiers are hereby discharged from any disgrace or opinion of disadvantage which might arise from their having refused to accept challenges, as they will only have acted in obedience to the law, and have done their duty as good soldiers, who subject themselves to discipline.

ART. 29. Any officer who thinks himself wronged by the commanding officer of his regiment, and, upon due application to such commander, is refused redress, may complain to the general commanding in the State or Territory where such regiment is stationed. The general shall examine into said complaint and take proper measures for redressing the wrong complained of; and he shall, as soon as possible, transmit to the Department of War a true statement of such complaint, with the proceedings had thereon.

ART. 30. Any soldier who thinks himself wronged by any officer may complain to the commanding officer of his regiment, who shall summon a regimental court-martial for the doing of justice to the complainant. Either party may appeal from such regimental court-martial to a general court-martial; but if, upon such second hearing,

the appeal appears to be groundless and vexatious, the party appealing shall be punished at the discretion of said general court-martial.

ART. 81. Any officer or soldier who lies out of his quarters, garrison, or camp, without leave from his superior officer, shall be punished as a court-martial may direct.

ART. 82. Any soldier who absents himself from his troop, battery, company, or detachment, without leave from his commanding officer, shall be punished as a court-martial may direct.

ART. 83. Any officer or soldier who fails, except when prevented by sickness or other necessity, to repair, at the fixed time, to the place of parade, exercise, or other rendezvous appointed by his commanding officer, or goes from the same, without leave from his commanding officer, before he is dismissed or relieved, shall be punished as a court-martial may direct.

ART. 84. Any soldier who is found one mile from camp, without leave in writing from his commanding officer, shall be punished as a court-martial may direct.

ART. 85. Any soldier who fails to retire to his quarters or tent at the beating of retreat, shall be punished according to the nature of his offense.

ART. 86. No soldier belonging to any regiment, troop, battery, or company shall hire another to do his duty for him, or be excused from duty, except in cases of sickness, disability, or leave of absence. Every such soldier found guilty of hiring his duty, and the person so hired to do another's duty, shall be punished as a court-martial may direct.

ART. 87. Every non-commissioned officer who connives at such hiring of duty shall be reduced. Every officer who knows and allows such practices shall be punished as a court-martial may direct.

ART. 88. Any officer who is found drunk on his guard, party, or other duty, shall be dismissed from the service. Any soldier who so offends shall suffer such punishment as a court-martial may direct. No court-martial shall sentence any soldier to be branded, marked, or tattooed.

ART. 89. Any sentinel who is found sleeping upon his post, or who leaves it before he is regularly relieved, shall suffer death, or such other punishment as a court-martial may direct.

ART. 90. Any officer or soldier who quits his guard, platoon, or division, without leave from his superior officer, except in a case of urgent necessity, shall be punished as a court-martial may direct.

ART. 91. Any officer who, by any means whatsoever, occasions false alarms in camp, garrison, or quarters, shall suffer death, or such other punishment as a court-martial may direct.

ART. 92. Any officer or soldier who misbehaves himself before the enemy, runs away, or shamefully abandons any fort,

post, or guard, which he is commanded to defend, or speaks words inducing others to do the like, or casts away his arms or ammunition, or quits his post or colors to plunder or pillage, shall suffer death, or such other punishment as a court-martial may direct.

ART. 93. If any commander of any garrison, fortress, or post is compelled, by the officers and soldiers under his command, to give up to the enemy or to abandon it, the officers or soldiers so offending shall suffer death, or such other punishment as a court-martial may direct.

ART. 94. Any person belonging to the armies of the United States who makes known the watch-word to any person not entitled to receive it, according to the rules and discipline of war, or presumes to give a parole or watch-word different from that which he received, shall suffer death, or such other punishment as a court-martial may direct.

ART. 95. Whosoever relieves the enemy with money, victuals, or ammunition, or knowingly harbors or protects an enemy, shall suffer death, or such other punishment as a court-martial may direct.

ART. 96. Whosoever holds correspondence with, or gives intelligence to, the enemy, either directly or indirectly, shall suffer death, or such other punishment as a court-martial may direct.

ART. 97. Any officer or soldier who, having received pay, or having been duly enlisted in the service of the United States, deserts the same, shall, in time of war, suffer death, or such other punishment as a court-martial may direct; and in time of peace, any punishment, excepting death, which a court-martial may direct.

ART. 98. Every soldier who deserts the service of the United States shall be liable to serve for such period as shall, with the time he may have served previous to his desertion, amount to the full term of his enlistment; and such soldier shall be tried by a court-martial and punished, although the term of his enlistment may have elapsed previous to his being apprehended and tried.

ART. 99. Any officer who, having tendered his resignation, quits his post or proper duties, without leave, and with intent to remain permanently absent therefrom, prior to due notice of the acceptance of the same, shall be deemed and punished as a deserter.

ART. 100. No non-commissioned officer or soldier shall enlist himself in any other regiment, troop, or company, without a regular discharge from the regiment, troop, or company in which he last served, on a penalty of being reputed a deserter, and suffering accordingly. And in case any officer shall knowingly receive and entertain such non-commissioned officer or soldier, or shall not, after his being discovered to be a deserter, immediately confine him and give notice thereof to the corps in which he last served,

the said officer shall, by a court-martial, be cashiered.

ART. 51. Any officer or soldier who advises or persuades any other officer or soldier to desert the service of the United States, shall, in time of war, suffer death, or such other punishment as a court-martial may direct; and in time of peace, any punishment, excepting death, which a court-martial may direct.

ART. 52. It is earnestly recommended to all officers and soldiers diligently to attend divine service. Any officer who behaves indecently or irreverently at any place of divine worship shall be brought before a general court-martial, there to be publicly and severely reprimanded by the president thereof. Any soldier who so offends shall, for his first offense, forfeit one-sixth of a dollar; for each further offense he shall forfeit a like sum, and shall be confined twenty-four hours. The money so forfeited shall be deducted from his next pay, and shall be applied, by the captain or senior officer of his troop, battery, or company, to the use of the sick soldiers of the same.

ART. 53. Any officer who uses any profane oath or execration shall, for each offense, forfeit and pay one dollar. Any soldier who so offends shall incur the penalties provided in the preceding article; and all moneys forfeited for such offense shall be applied as therein provided.

ART. 54. Every officer commanding in quarters, garrison, or on the march, shall keep good order, and, to the utmost of his power, redress all abuses or disorders which may be committed by any officer or soldier under his command; and if, upon complaint made to him of officers or soldiers beating or otherwise ill-treating any person, disturbing fairs or markets, or committing any kind of riot, to the disquieting of the citizens of the United States, he refuses or omits to see justice done to the offender, and reparation made to the party injured, so far as part of the offender's pay shall go towards such reparation, he shall be dismissed from the service, or otherwise punished, as a court-martial may direct.

ART. 55. All officers and soldiers are to behave themselves orderly in quarters and on the march; and whoever commits any waste or spoil, either in walks or trees, parks, warrens, fish-ponds, houses, gardens, grain-fields, inclosures, or meadows, or maliciously destroys any property whatsoever belonging to inhabitants of the United States (unless by order of a general officer commanding a separate army in the field), shall, besides such penalties as he may be liable to by law, be punished as a court-martial may direct.

ART. 56. Any officer or soldier who does violence to any person bringing provisions or other necessaries to the camp, garrison, or quarters of the forces of the United States in foreign parts, shall suffer death, or such other punishment as a court-martial may direct.

ART. 57. Whosoever, belonging to the armies of the United States in foreign parts, or at any place within the United States or their Territories during rebellion against the supreme authority of the United States, forces a safeguard, shall suffer death.

ART. 58. In time of war, insurrection, or rebellion, larceny, robbery, burglary, arson, mayhem, manslaughter, murder, assault and battery with an intent to kill, wounding, by shooting or stabbing, with an intent to commit murder, rape, or assault and battery with an intent to commit rape, shall be punishable by the sentence of a general court-martial, when committed by persons in the military service of the United States, and the punishment in any such case shall not be less than the punishment provided, for the like offense, by the laws of the State, Territory, or district in which such offense may have been committed.

ART. 59. When any officer or soldier is accused of a capital crime, or of any offense against the person or property of any citizen of any of the United States, which is punishable by the laws of the land, the commanding officer, and the officers of the regiment, troop, battery, company, or detachment, to which the person so accused belongs, are required, except in time of war, upon application duly made by or in behalf of the party injured to use their utmost endeavors to deliver him over to the civil magistrate, and to aid the officers of justice in apprehending and securing him, in order to bring him to trial. If upon such application, any officer refuses or willfully neglects, except in time of war, to deliver over such accused person to the civil magistrates, or to aid the officers of justice in apprehending him, he shall be dismissed from the service.

ART. 60. Any person in the military service of the United States who makes or causes to be made any claim against the United States, or any officer thereof, knowing such claim to be false or fraudulent; or

Who presents or causes to be presented to any person in the civil or military service thereof, for approval or payment, any claim against the United States or any officer thereof, knowing such claim to be false or fraudulent; or

Who enters into any agreement or conspiracy to defraud the United States by obtaining, or aiding others to obtain, the allowance or payment of any false or fraudulent claim; or

Who, for the purpose of obtaining, or aiding others to obtain, the approval, allowance, or payment of any claim against the United States or against any officer thereof, makes or uses, or procures or advises the making or use of, any writing, or other paper, knowing the same to contain any false or fraudulent statement; or

Who, for the purpose of obtaining, or aiding others to obtain, the approval, allowance, or payment of any claim against the United States or any officer thereof, makes,

or procures or advises the making of, any oath to any fact, or to any writing or other paper, knowing such oath to be false; or

Who, for the purpose of obtaining, or aiding others to obtain, the approval, allowance, or payment of any claim against the United States or any officer thereof, forges or counterfeits, or procures or advises the forging or counterfeiting of, any signature upon any writing or other paper, or uses, or procures or advises the use of, any such signature, knowing the same to be forged or counterfeited; or

Who, having charge, possession, custody, or control of any money or other property of the United States, furnished or intended for the military service thereof, knowingly delivers, or causes to be delivered, to any person having authority to receive the same, any amount thereof less than that for which he receives a certificate or receipt; or

Who, being authorized to make or deliver any paper certifying the receipt of any property of the United States, furnished or intended for the military service thereof, makes, or delivers to any person, such writing, without having full knowledge of the truth of the statements therein contained, and with intent to defraud the United States; or

Who steals, embezzles, knowingly and willfully misappropriates, applies to his own use or benefit, or wrongfully or knowingly sells or disposes of any ordnance, arms, equipments, ammunition, clothing, subsistence stores, money, or other property of the United States, furnished or intended for the military service thereof; or

Who knowingly purchases, or receives in pledge for any obligation or indebtedness, from any soldier, officer, or other person who is a part of or employed in said forces or service, any ordnance, arms, equipments, ammunition, clothing, subsistence stores, or other property of the United States, such soldier, officer, or other person not having lawful right to sell or pledge the same,

Shall, on conviction thereof, be punished by fine or imprisonment, or by such other punishment as a court-martial may adjudge. And if any person, being guilty of any of the offenses aforesaid, while in the military service of the United States, receives his discharge, or is dismissed from the service, he shall continue to be liable to be arrested and held for trial and sentence by a court-martial, in the same manner and to the same extent as if he had not received such discharge nor been dismissed.

ART. 61. Any officer who is convicted of conduct unbecoming an officer and a gentleman shall be dismissed from the service.

ART. 62. All crimes not capital, and all disorders and neglects, which officers and soldiers may be guilty of, to the prejudice of good order and military discipline, though not mentioned in the foregoing Articles of War, are to be taken cognizance of by a general, or a regimental, garrison, or field-

officers' court-marshal,* according to the nature and degree of the offense, and punished at the discretion of said court.

ART. 63. All retainers to the camp, and all persons serving with the armies of the United States in the field, though not enlisted soldiers, are to be subject to orders, according to the rules and discipline of war.

ART. 64. The officers and soldiers of any troops, whether militia or others, mustered and in pay of the United States, shall, at all times and in all places, be governed by the Articles of War, and shall be subject to be tried by courts-martial.

ART. 65. Officers charged with crime shall be arrested and confined in their barracks, quarters, or tents, and deprived of their swords by the commanding officer. And any officer who leaves his confinement before he is set at liberty by his commanding officer shall be dismissed from the service.

ART. 66. Soldiers charged with crimes shall be confined until tried by court-martial, or released by proper authority.

ART. 67. No provost-marshal, or officer commanding a guard, shall refuse to receive or keep any prisoner committed to his charge by an officer belonging to the forces of the United States; provided the officer committing shall, at the same time, deliver an account in writing, signed by himself, of the crime charged against the prisoner.

ART. 68. Every officer to whose charge a prisoner is committed shall, within twenty-four hours after such commitment, or as soon as he is relieved from his guard, report in writing, to the commanding officer, the name of such prisoner, the crime charged against him, and the name of the officer committing him; and if he fails to make such report, he shall be punished as a court-martial may direct.

ART. 69. Any officer who presumes, without proper authority, to release any prisoner committed to his charge, or suffers any prisoner so committed to escape, shall be punished as a court-martial may direct.

ART. 70. No officer or soldier put in arrest shall be continued in confinement more than eight days, or until such time as a court-martial can be assembled.

ART. 71. When an officer is put in arrest for the purpose of trial, except at remote military posts or stations, the officer by whose order he is arrested shall see that a copy of the charges on which he is to be tried is served upon him within eight days after his arrest, and that he is brought to trial within ten days thereafter, unless the necessities of the service prevent such trial; and then he shall be brought to trial within thirty days after the expiration of said ten days. If a copy of the charges be not served, or the arrested officer be not brought to trial, as herein required, the arrest shall

* Court-martial.

cease. But officers released from arrest, under the provisions of this article, may be tried, whenever the exigencies of the service shall permit, within twelve months after such release from arrest.

ART. 72. Any general officer, commanding the army of the United States, a separate army, or a separate department, shall be competent to appoint a general court-martial, either in time of peace or in time of war. But when any such commander is the accuser or prosecutor of any officer under his command, the court shall be appointed by the President, and its proceedings and sentence shall be sent directly to the Secretary of War, by whom they shall be laid before the President, for his approval or orders in the case.

ART. 73. In time of war the commander of a division, or of a separate brigade of troops, shall be competent to appoint a general court-martial. But when such commander is the accuser or prosecutor of any person under his command, the court shall be appointed by the next higher commander.

ART. 74. Officers who may appoint a court-martial shall be competent to appoint a judge-advocate for the same.

ART. 75. General courts-martial may consist of any number of officers from five to thirteen, inclusive; but they shall not consist of less than thirteen when that number can be convened without manifest injury to the service.

ART. 76. When the requisite number of officers to form a general court-martial is not present in any post or detachment, the commanding officer shall, in cases which require the cognizance of such a court, report to the commanding officer of the department, who shall, thereupon, order a court to be assembled at the nearest post or department at which there may be such a requisite number of officers, and shall order the party accused, with necessary witnesses, to be transported to the place where the said court shall be assembled.

ART. 77. Officers of the Regular Army shall not be competent to sit on courts-martial to try the officers or soldiers of other forces, except as provided in Article 78.

ART. 78. Officers of the Marine Corps, detached for service with the Army by order of the President, may be associated with officers of the Regular Army on courts-martial for the trial of offenders belonging to the Regular Army, or to forces of the Marine Corps so detached; and in such cases the orders of the senior officer of either corps who may be present and duly authorized, shall be obeyed.

ART. 79. Officers shall be tried only by general courts-martial; and no officer shall, when it can be avoided, be tried by officers inferior to him in rank.

ART. 80. In time of war a field-officer may be detailed in every regiment, to try soldiers thereof for offenses not capital; and no soldier, serving with his regiment, shall

be tried by a regimental* garrison court-martial when a field-officer of his regiment may be so detailed.

ART. 81. Every officer commanding a regiment or corps shall, subject to the provisions of article eighty, be competent to appoint, for his own regiment or corps, courts-martial, consisting of three officers, to try offenses not capital.

ART. 82. Every officer commanding a garrison, fort, or other place, where the troops consist of different corps, shall, subject to the provisions of article eighty, be competent to appoint, for such garrison or other place, courts-martial, consisting of three officers, to try offenses not capital.

ART. 83. Regimental and garrison courts-martial, and field-officers detailed to try offenders, shall not have power to try capital cases or commissioned officers, or to inflict a fine exceeding one month's pay, or to imprison or put to hard labor any non-commissioned officer or soldier for a longer time than one month.

ART. 84. The judge-advocate shall administer to each member of the court, before they proceed upon any trial, the following oath, which shall also be taken by all members of regimental and garrison courts-martial: "You, A B, do swear that you will well and truly try and determine, according to evidence, the matter now before you, between the United States of America and the prisoner to be tried, and that you will duly administer justice, without partiality, favor, or affection, according to the provisions of the rules and articles for the government of the armies of the United States, and if any doubt should arise, not explained by said articles, then according to your conscience, the best of your understanding, and the custom of war in like cases; and you do further swear that you will not divulge the sentence of the court until it shall be published by the proper authorities; neither will you disclose or discover the vote or opinion of any particular member of the court-martial, unless required to give evidence thereof, as a witness, by a court of justice, in a due course of law. So help you God."

ART. 85. When the oath has been administered to the members of a court-martial, the president of the court shall administer to the judge-advocate, or person officiating as such, an oath in the following form: "You, A B, do swear that you will not disclose or discover the vote or opinion of any particular member of the court-martial, unless required to give evidence thereof, as a witness, by a court of justice, in due course of law; nor divulge the sentence of the court to any but the proper authority, until it shall be duly disclosed by the same. So help you God."

ART. 86. A court-martial may punish, at discretion, any person who uses any

*The word or omitted from the roll.

menacing words, signs or gestures, in its presence, or who disturbs its proceedings by any riot or disorder.

ART. 87. All members of a court-martial are to behave with decency and calmness.

ART. 88. Members of a court-martial may be challenged by a prisoner, but only for cause stated to the court. The court shall determine the relevancy and validity thereof, and shall not receive a challenge to more than one member at a time.

ART. 89. When a prisoner, arraigned before a general court-martial, from obstinacy and deliberate design, stands mute, or answers foreign to the purpose, the court may proceed to trial and judgment, as if the prisoner had pleaded not guilty.

ART. 90. The judge-advocate, or some person deputed by him, or by the general or officer commanding the army, detachment, or garrison, shall prosecute in the name of the United States, but when the prisoner has made his plea, he shall so far consider himself counsel for the prisoner as to object to any leading question to any of the witnesses, and to any question to the prisoner the answer to which might tend to criminate himself.

ART. 91. The depositions of witnesses residing beyond the limits of the State, Territory, or District in which any military court may be ordered to sit, if taken on reasonable notice to the opposite party and duly authenticated, may be read in evidence before such court in cases not capital.

ART. 92. All persons who give evidence before a court-martial shall be examined on oath, or affirmation, in the following form: "You swear (or affirm) that the evidence you shall give, in the case now in hearing, shall be the truth, the whole truth, and nothing but the truth. So help you God."

ART. 93. A court-martial shall, for reasonable cause, grant a continuance to either party, for such time, and as often, as may appear to be just: *Provided*, That if the prisoner be in close confinement, the trial shall not be delayed for a period longer than sixty days.

ART. 94. Proceedings of trials shall be carried on only between the hours of eight in the morning and three in the afternoon, excepting in cases which, in the opinion of the officer appointing the court, require immediate example.

ART. 95. Members of a court-martial, in giving their votes, shall begin with the youngest in commission.

ART. 96. No person shall be sentenced to suffer death, except by the concurrence of two-thirds of the members of a general court-martial, and in the cases herein expressly mentioned.

ART. 97. No person in the military service shall, under the sentence of a court-martial, be punished by confinement in a penitentiary, unless the offense of which he may be convicted would, by some statute of the United States, or by some statute of the

State, Territory, or District in which such offense may be committed, or by the common law, as the same exists in such State, Territory, or District, subject such convict to such punishment.

ART. 98. No person in the military service shall be punished by flogging, or by branding, marking, or tattooing on the body.

ART. 99. No officer shall be discharged or dismissed from the service, except by order of the President, or by sentence of a general court-martial; and in time of peace no officer shall be dismissed, except in pursuance of the sentence of a court-martial, or in mitigation thereof.

ART. 100. When an officer is dismissed from the service for cowardice or fraud, the sentence shall further direct that the crime, punishment, name, and place of abode of the delinquent shall be published in the newspapers in and about the camp, and in the State from which the offender came, or where he usually resides; and after such publication it shall be scandalous for an officer to associate with him.

ART. 101. When a court-martial suspends an officer from command, it may also suspend his pay and emoluments for the same time, according to the nature of his offense.

ART. 102. No person shall be tried a second time for the same offense.

ART. 103. No person shall be liable to be tried and punished by a general court-martial for any offense which appears to have been committed more than two years before the issuing of the order for such trial, unless, by reason of having absented himself, or of some other manifest impediment, he shall not have been amenable to justice within that period.

ART. 104. No sentence of a court-martial shall be carried into execution until the whole proceedings shall have been approved by the officer ordering the court, or by the officer commanding for the time being.

ART. 105. No sentence of a court-martial, inflicting the punishment of death, shall be carried into execution until it shall have been confirmed by the President; except in the cases of persons convicted, in time of war, as spies, mutineers, deserters, or murderers, and in the cases of guerilla marauders, convicted, in time of war, of robbery, burglary, arson, rape, assault with intent to commit rape, or of violation of the laws and customs of war; and in such excepted cases the sentence of death may be carried into execution upon confirmation by the commanding general in the field, or the commander of the department, as the case may be.

ART. 106. In time of peace no sentence of a court-martial, directing the dismissal of an officer, shall be carried into execution, until it shall have been confirmed by the President.

ART. 107. No sentence of a court-mar-

tial appointed by the commander of a division or of a separate brigade of troops, directing the dismissal of an officer, shall be carried into execution until it shall have been confirmed by the general commanding the army in the field to which the division or brigade belongs.

ART. 108. No sentence of a court-martial, either in time of peace or in time of war, respecting a general officer, shall be carried into execution, until it shall have been confirmed by the President.

ART. 109. All sentences of a court-martial may be confirmed and carried into execution by the officer ordering the court, or by the officer commanding for the time being, where confirmation by the President, or by the commanding general in the field, or commander of the department, is not required by these articles.

ART. 110. No sentence of a field-officer, detailed to try soldiers of his regiment, shall be carried into execution, until the whole proceedings shall have been approved by the brigade commander, or, in case there be no brigade commander, by the commanding officer of the post.

ART. 111. Any officer who has authority to carry into execution the sentence of death, or of dismissal of an officer, may suspend the same until the pleasure of the President shall be known; and, in such case, he shall immediately transmit to the President a copy of the order of suspension, together with a copy of the proceedings of the court.

ART. 112. Every officer who is authorized to order a general court-martial shall have power to pardon or mitigate any punishment adjudged by it, except the punishment of death, or of dismissal of an officer. Every officer commanding a regiment or garrison in which a regimental or garrison court-martial may be held, shall have power to pardon or mitigate any punishment which such court may adjudge.

ART. 113. Every judge-advocate, or person acting as such, at any general court-martial, shall, with as much expedition as the opportunity of time and distance of place may admit, forward the original proceedings and sentence of such court to the Judge-Advocate General of the Army, in whose office they shall be carefully preserved.

ART. 114. Every party tried by a general court-martial shall, upon demand thereof, made by himself, or by any person in his behalf, be entitled to a copy of the proceedings and sentence of such court.

ART. 115. A court of inquiry, to examine into the nature of any transaction of, or accusation or imputation against, any officer or soldier, may be ordered by the President or by any commanding officer; but, as courts of inquiry may be perverted to dishonorable purposes, and may be employed, in the hands of weak and envious commandants, as engines for the destruction of military merit, they shall never be ordered by any commanding officer, except upon a demand by the

officer or soldier whose conduct is to be inquired of.

ART. 116. A court of inquiry shall consist of one or more officers, not exceeding three, and a recorder, to reduce the proceedings and evidence to writing.

ART. 117. The recorder of a court of inquiry shall administer to the members the following oath: "You shall well and truly examine and inquire, according to the evidence, into the matter now before you, without partiality, favor, affection, prejudice, or hope of reward. So help you God." After which the president of the court shall administer to the recorder the following oath: "You, A B, do swear that you will, according to your best abilities, accurately and impartially record the proceedings of the court and the evidence to be given in the case in hearing. So help you God."

ART. 118. A court of inquiry, and the recorder thereof, shall have the same power to summon and examine witnesses as is given to courts-martial and the judge-advocates thereof. Such witnesses shall take the same oath which is taken by witnesses before courts-martial,* and the party accused shall be permitted to examine and cross-examine them, so as fully to investigate the circumstances in question.

ART. 119. A court of inquiry shall not give an opinion on the merits of the case inquired of unless specially ordered to do so.

ART. 120. The proceedings of a court of inquiry must be authenticated by the signatures of the recorder and the president thereof, and delivered to the commanding officer.

ART. 121. The proceedings of a court of inquiry may be admitted as evidence by a court-martial, in cases not capital, nor extending to the dismissal of an officer: *Provided*, That the circumstances are such that oral testimony cannot be obtained.

ART. 122. If, upon marches, guards, or in quarters, different corps of the Army happen to join or do duty together, the officer highest in rank of the line of the Army, Marine Corps, or militia, by commission, there on duty or in quarters, shall command the whole, and give orders for what is needful to the service, unless otherwise specially directed by the President, according to the nature of the case.

ART. 123. In all matters relating to the rank, duties, and rights of officers, the same rules and regulations shall apply to officers of the Regular Army and to volunteers commissioned in, or mustered into said service, under the laws of the United States, for a limited period.

ART. 124. Officers of the militia of the several States, when called into the service of the United States, shall on all detachments, courts-martial, and other duty wherein they may be employed in conjunction with the regular or volunteer forces of

* See in the roll.

the United States, take rank next after all officers of the like grade in said regular or volunteer forces, notwithstanding the commissions of such militia officers may be older than the commissions of the said officers of the regular or volunteer forces of the United States.

ART. 125. In case of the death of any officer, the major of his regiment, or the officer doing the major's duty, or the second officer in command at any post or garrison, as the case may be, shall immediately secure all his effects then in camp or quarters, and shall make, and transmit to the office of the Department of War, an inventory thereof.

ART. 126. In case of the death of any soldier, the commanding officer of his troop, battery, or company shall immediately secure all his effects then in camp or quarters, and shall, in the presence of two other officers, make an inventory thereof, which he shall transmit to the office of the Department of War.

ART. 127. Officers charged with the care of the effects of deceased officers or soldiers

shall account for and deliver the same, or the proceeds thereof, to the legal representatives of such deceased officers or soldiers. And no officer so charged shall be permitted to quit the regiment or post until he has deposited in the hands of the commanding officer all the effects of such deceased officers or soldiers not so accounted for and delivered.

ART. 128. The foregoing articles shall be read and published, once in every six months, to every garrison, regiment, troop, or company in the service of the United States, and shall be duly observed and obeyed by all officers and soldiers in said service.

SEC. 1848. All persons who, in time of war, or of rebellion against the supreme authority of the United States, shall be found lurking or acting as spies, in or about any of the fortifications, posts, quarters, or encampments of any of the armies of the United States, or elsewhere, shall be triable by a general court-martial, or by a military commission, and shall, on conviction thereof, suffer death.

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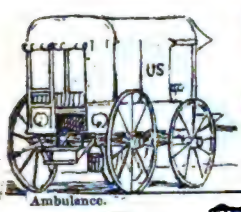
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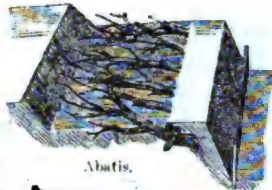
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| Martelo-de-fer..... 13 | Ball, Chassépot..... 16 | Werndl Rifle..... 17 |
| Massees d'Armes..... 13 | Bullet, Percussion..... 16 | Werndl Carbine..... 17 |
| Mattock..... 13 | Cartridge, Multi-ball..... 16 | Werndl Carbine..... 17 |
| Merlons..... 13 | Fixed Round-shot..... 16 | Pistolets, 16th and 18th Cen- turies..... 18 |
| Miner, 1786 (England)..... 26 | Fixed Canister..... 16 | Pistol, 1855..... 18 |
| Minié-ball..... 13 | Projectile, Krupp Howitzer..... 16 | Pistol, Werndl..... 18 |
| Mining..... 24 | Projectile, English Howitzer..... 16 | Pistol, 18th Century..... 18 |
| Shaft with Cases..... 24 | Projectile, Butler..... 16 | Percussion-lock..... 18 |
| Shaft with Frames..... 24 | Projectile, Whitworth..... 16 | Revolver, Austrian..... 18 |
| Shaft, Hard Soil..... 24 | Sabot..... 16 | Beach's Combination Sight..... 16 |
| Galleries, Hard Soil..... 24 | Strapped Shell..... 16 | Lyman's Combination Sight..... 16 |
| False Frames, Use of..... 24 | Oriflamme..... 17 | Chassépot Sight..... 16 |
| Detonator, No. 5..... 24 | Pack and Draught Animals..... 18 | Globe Sight..... 16 |
| Detonator, No. 8..... 24 | Buffalo..... 18 | Martini-Henry Sight..... 16 |
| Detonator, No. 9..... 24 | Camel, Bactrian..... 18 | Wind-gauge (Spirit Level)..... 16 |
| Detonator, No. 10..... 24 | Dromedary..... 18 | Wind-gauge and Sight, U. S..... 16 |
| Detonator, No. 13..... 24 | Dromedary and Saddle..... 18 | Winchester Reversible Sight..... 16 |
| Fuse No. 1..... 24 | Elephant..... 18 | Soldier of the "Legion Cophte"..... 26 |
| Fuse, Instantaneous (Bick- ford's)..... 24 | Horse..... 18 | Soldier Foot Legion (Roman)..... 25 |
| Tube, No. 4..... 24 | Llama..... 18 | Sphais..... 30 |
| Fuses in pairs, coupling up..... 24 | Mule..... 18 | Sparum..... 20 |
| Fuses in Powder-bag, Inser- tion of..... 24 | Mule laden with pack on cross-tree saddle..... 18 | Spear..... 20 |
| Quantity Dynamo-Electric Machine..... 24 | Pack-saddle..... 18 | Spear-heads..... 20 |
| Circuit, Continuous..... 24 | Paludamentum..... 25 | Spurs..... 20 |
| Circuit, Simple..... 24 | Parallels..... 23 | Standard..... 21 |
| Commencement of Three Way Joint..... 24 | Parthian..... 26 | Standard, Pasha's..... 21 |
| Tube, Flexible..... 24 | Pavior and Pavise..... 18 | Strrup, 18th Century..... 21 |
| Tube, Tin..... 24 | Petard..... 18 | Strappado..... 20 |
| Miner's Pick..... 24 | Pilum..... 19 | Stylets..... 20 |
| Push Pick..... 24 | Piquet..... 25 | Swiss Captain (1550)..... 26 |
| Miner's Shovel..... 24 | Pistolier, 17th Century..... 21 | Swords..... 20 |
| Miner's Truck..... 24 | Platform, Gun..... 9 | Tabard..... 22 |
| Candle-stick..... 24 | Plummet Stand..... 18 | Tangent Scale..... 21 |
| Bucket..... 24 | Plummet Stand..... 19 | Target, Floating..... 21 |
| Bellows..... 24 | Pointing Instruments..... 18 | Target, Laidley's Shelter..... 21 |
| Spark Measurer..... 24 | Pointing Mortars..... 23 | Targets..... 21 |
| Miquelet..... 27 | Pole-axes..... 18 | Tasses, or Taseses..... 21 |
| Mole..... 13 | Pondar..... 18 | Telegraph (Electric Field)..... 21 |
| Murion..... 13 | Portcullis..... 19 | Telemeter..... 22 |
| Musculas, 14th Century..... 23 | Portuguese Legion..... 27 | Telemeter, for Field and Moun- tain Batteries..... 22 |
| National Guard (Mexico)..... 28 | Powder..... 23 | Telemeters..... 22 |
| Officer of the Guard (Prussia)..... 28 | Cubical..... 23 | Tents..... 23 |
| Ordnance..... 14 | Hexagonal..... 23 | "A," or Common Tent..... 22 |
| Armstrong Gun (8-inch)..... 14 | Mammoth..... 23 | Bell-tent..... 22 |
| Cannon, 15th Century..... 14 | Prismatic (Molded)..... 23 | Cushing's Shelter-tent..... 22 |
| Cannon, 16th Century..... 14 | For 3-inch and 3½-inch Field Rifle..... 23 | Pole (open)..... 22 |
| Cannon, 17th Century..... 14 | Presterian..... 25 | Pole (shut)..... 22 |
| Carronade..... 15 | Presterian..... 29 | Conical Tent (France)..... 22 |
| Calson and Body..... 17 | Quiver..... 20 | Hospital Tent (Russian)..... 22 |
| Calson and Limber..... 15 | Quoin..... 20 | Roman Tents..... 23 |
| Field-gun and Carriage, Ger- man..... 15 | Range-finder, Nolan's..... 20 | Shelter-tent..... 22 |
| Field-gun and Carriage, Swe- dish..... 15 | Ravella..... 20 | Sibley Tent..... 23 |
| Forge and Body, Traveling..... 17 | Réchaud..... 20 | Sibley Wall-tent..... 23 |
| Flank Casemate-carriage..... 15 | Redoubt..... 20 | Tent-d'abri (France)..... 22 |
| Gatling Gun..... 14 | Ribaud..... 25 | Wall-tent..... 22 |
| Gatling Gun on Cavalry Cart..... 14 | Ribaudequin..... 23 | Tirailleur, Native (Algeria)..... 27 |
| Gin..... 15 | Rivers, Means employed in pass- ing..... 19 | Toga..... 21 |
| Gun-lifts..... 15 | Pontoon..... 19 | Tollénon..... 21 |
| Gunner's Quadrant..... 17 | Pontoon-bridge..... 19 | Tomahawks..... 21 |
| Howitzer..... 15 | Raft complete..... 19 | Tortue d'Hommes..... 22 |
| Howitzer and Carriage, Siege- Howitzer, German..... 14 | Raft, Log..... 19 | Tour Béliers..... 22 |
| Krupp 12-inch Gun and Car- riage..... 16 | Flying Bridges..... 19 | Tower..... 21 |
| Limber..... 17 | Barrel Pier..... 19 | Tower, Watch..... 21 |
| Mortar..... 14 | Roi d'Armes..... 26 | Trajectory..... 22 |
| Mortar, Cohorn..... 14 | Rondelle..... 20 | Tribune, Military (Roman)..... 25 |
| Mortar, Russian..... 14 | Salutische..... 20 | Trident..... 21 |
| Mortar and Carriage, Aus- trian..... 14 | Saddle..... 21 | Tromblon..... 23 |
| Mortar and Carriage, Krupp..... 15 | Salade..... 5 | Trumpet..... 22 |
| Mortar-wagon..... 15 | Sapper of the "Legion of the Vistula"..... 27 | Unicorn..... 23 |
| Mortars, Pointing..... 23 | Sceptre..... 20 | Velite..... 25 |
| Sea-coast Carriage..... 15 | Scorpion..... 20 | Velite, 1807..... 25 |
| Shears..... 16 | Scutum..... 20 | Vexilla..... 29 |
| Siege-gun-carriage..... 15 | Semaphores..... 20 | Vexilla..... 23 |
| | Sepoy..... 26 | Vireton..... 28 |
| | Shabraces, 1800-1850..... 23 | Vivandière..... 26 |
| | Shakes..... 5 | Vivandière, 1809 (France)..... 30 |
| | Shield..... 20 | Wahabees..... 29 |
| | Signal Pistol fired..... 20 | Wigwam..... 22 |
| | | Zagale..... 23 |
| | | Zouaves (France)..... 27 |

PLATE I.



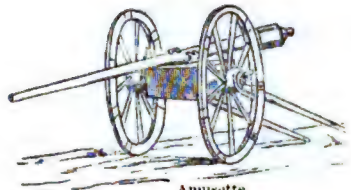
Ambulance.



Abatis.



Arquebuse.



Artillerie.



Arrière.



AIMING KNEELING.



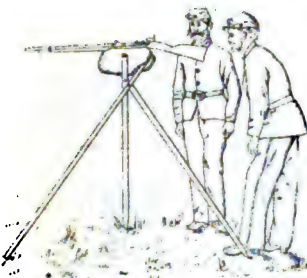
AIMING WITH AN OVERHEAD REST.



Arrière



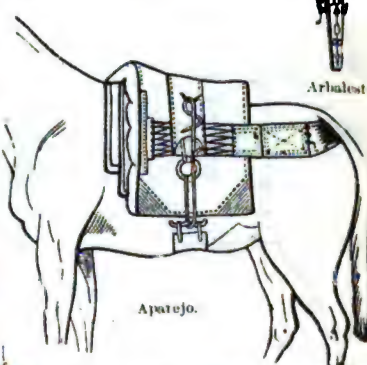
Arrière



A SAND-BAG REST.



Arch.



Apatejo.



Aqueduct.



Arrière.



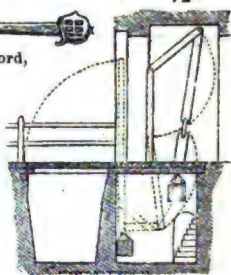
Battering Ram.



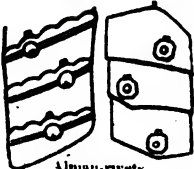
Broadsword.



Blunderbuss.



Bascule Bridge.



Man-rivet.



Arrière.



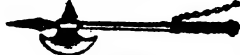
Beaver.



Rock-house.



Settlement.

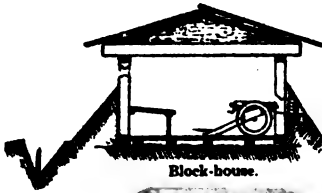


Battle-ax.

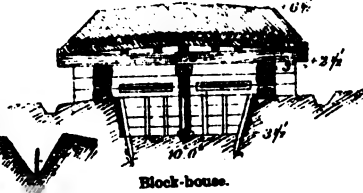


Bagpipe.

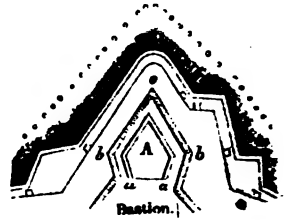
PLATE 2.



Block-house.

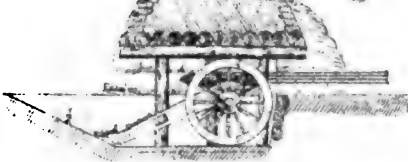


Block-house.



Bastion.

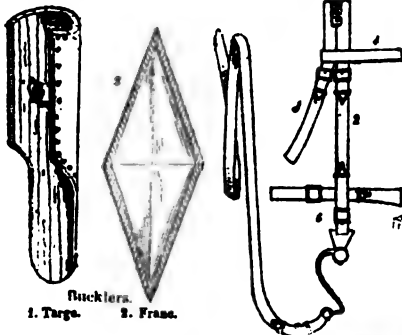
A, bastion; a, curtain angle; b, shoulder angle; c, salient angle; a a, gorge; a b, flank; a d, curtain; b c, face.



Casting Blind.

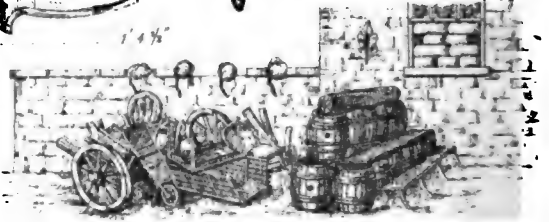


Bill Hook, 1 lb 12 oz.

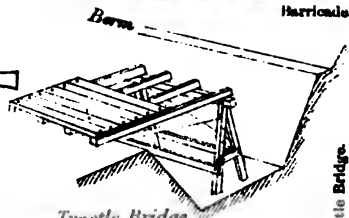


Buckler.

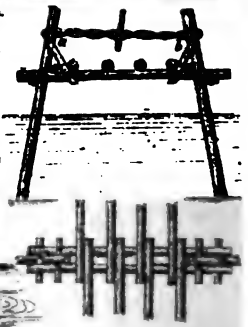
1. Target. 2. Frame.



Barricade.

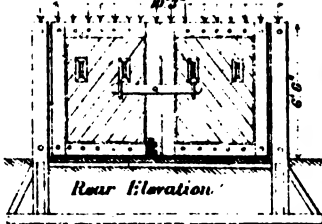


Trestle Bridge.



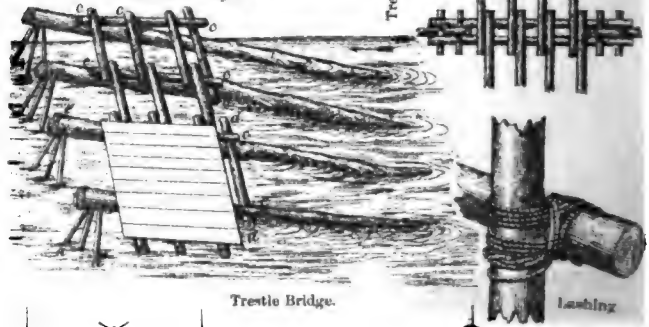
Trestle Bridge.

BULLET-PROOF GATE.

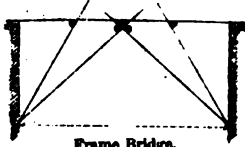


Rear Elevation.

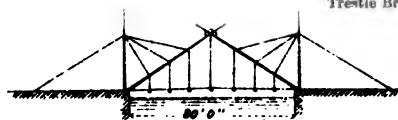
Bridge.



Trestle Bridge.



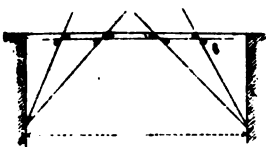
Frame Bridge.



Sling Bridge.



Tension Bridge.



Frame Bridge.



Suspension Bridge.



Holdfast.



Suspension Bridge.

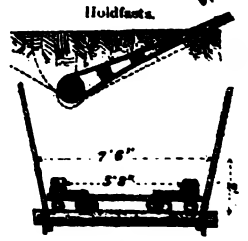
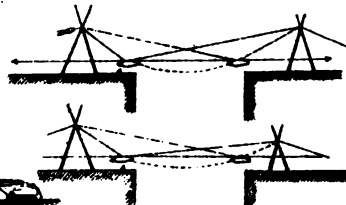
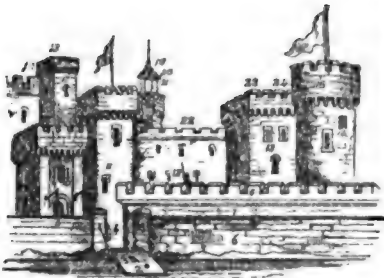


PLATE 4.



Castle.

1, moat; 2, drawbridge; 3, wicket; 4, entry-port; 5, portcullis; 6, outer wall; 7, parapet; 8, rampart; 9, loop-holes; 10, curtain; 11, bulwark; 12, sentry; 13, magazine; 14, a cell; 15, dungeon or keep; 16, barracks; 17, balcony; 18, watchtower; 19, turret; 20, chapel; 21, bailey; 22, state court; 23, arsenal; 24, embankment.



Casemate.



Crinoline.



Caligue.



Carbine, 17th century.

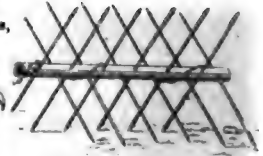


Coat of Mail.



Diameter.

Colors.



Cheval de frise.



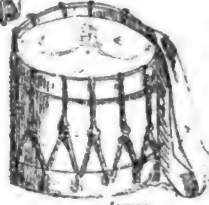
Casse-tête.



Crémides.



Clunacium.



Drum.



Cimeterre.



Decoration.



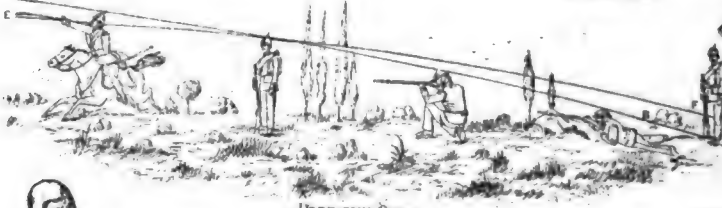
Dart.



Drawbridge.



Dou-jen.



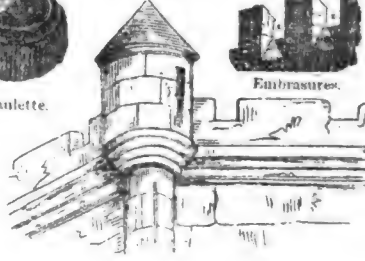
Dangerous Space.
A, B, E, F. Trajectories.
(Laidley)



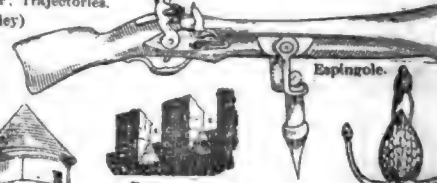
Ecu.



Epaulette.



Echaugette.



Espingole.



Embrasures.



Daggers.



Devise.

PLATE 5.

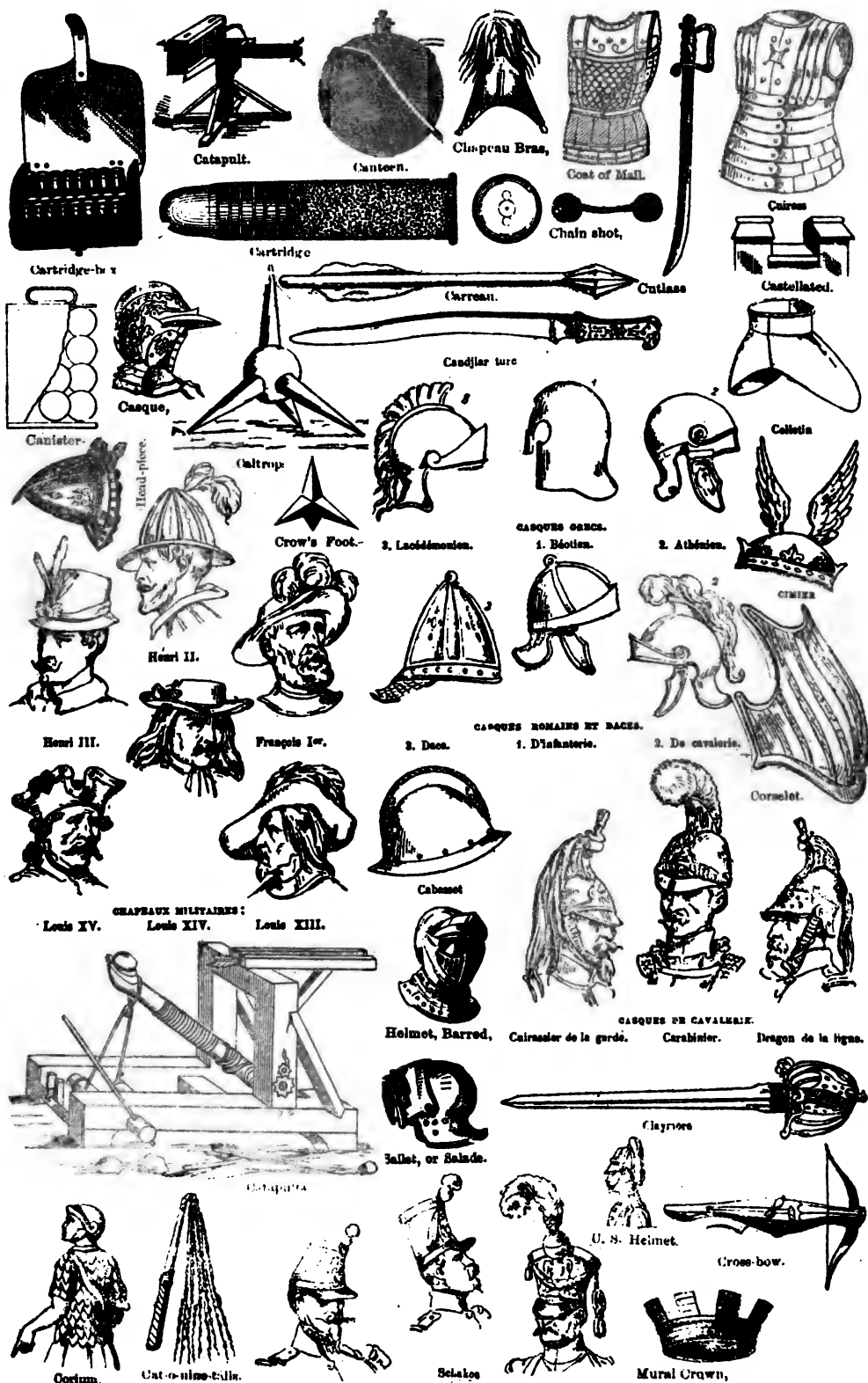
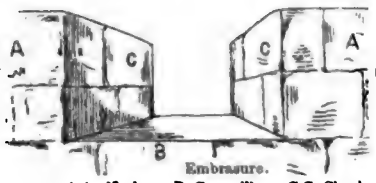
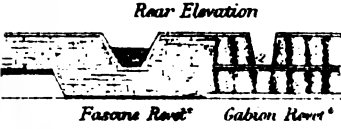


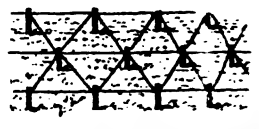
PLATE 6.



A A, Mortars. B, Genouilliers. C C, Cheeks.



Fascine Row. Gabion Row.



Wire Entanglement.



Embrasure lining of boiler iron, with mantlet.



Roman Eagles.



Embrasures.



Fireball.



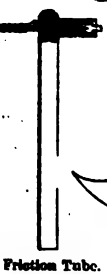
Foll.



Kapadon.



Fire-arrow.



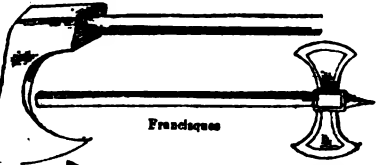
Friction Tube.



Fascine.



Fascos.



Fendague.



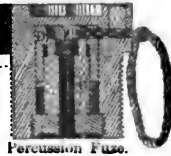
Falarique.



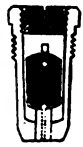
Rear Elevation Section FASCINE BLIND



Time Fuse.



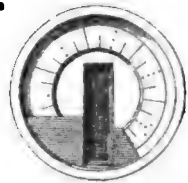
Percussion Fuse. (English G. S.)



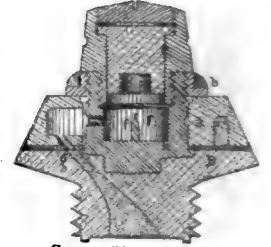
Percussion Fuse.



Time Fuse.



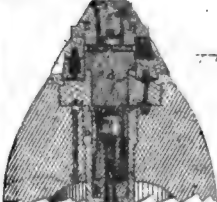
Bormann-fuse.



German Time Fuse.



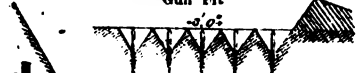
Percussion Fuse. (English G. S.)



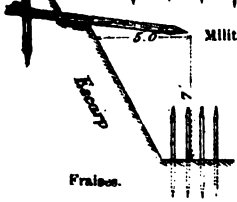
Swiss Combination Fuse.



Gun Pit.



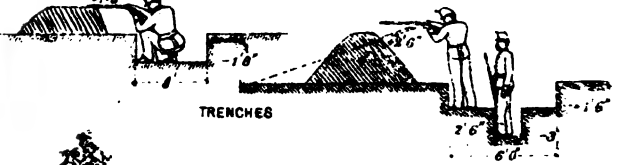
Military Pits.



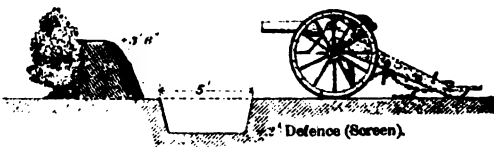
Fraises.



TRENCHES



Defence (Hedges).

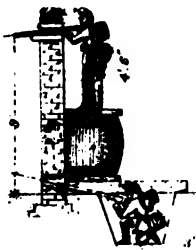


Defence (Screen).

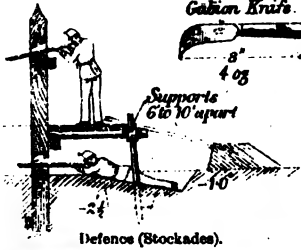


Defence (Wall).

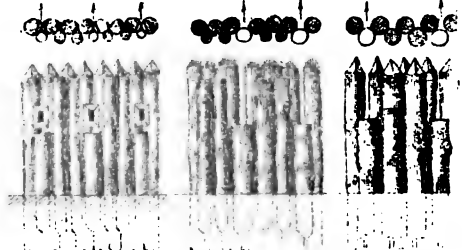
PLATE 7.



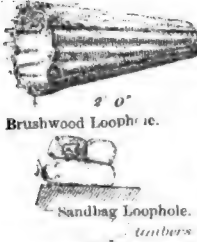
Defence (Wall).



Defence (Stockades).

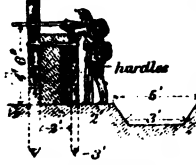


LOG LOOPHOLE



Brushwood Loophole.

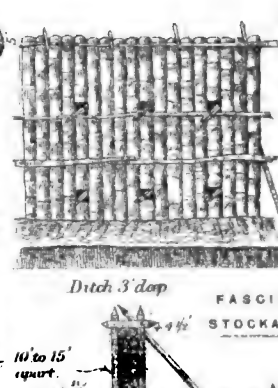
Sandbag Loophole.



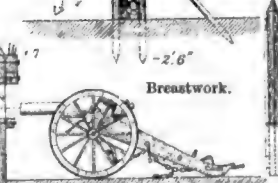
Breastwork.



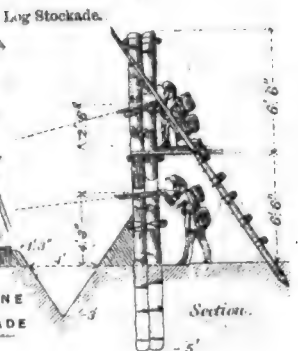
Breastwork.



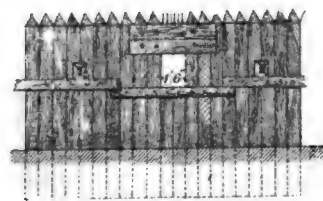
Log Stockade.



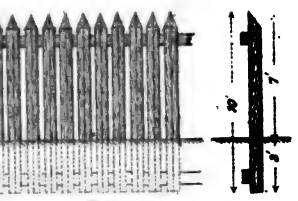
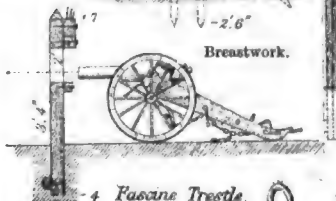
Breastwork.



Section.



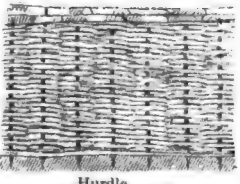
Gun or Gatling-port in Stockade.



Palisades.



Gabion.



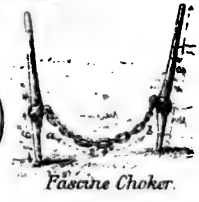
Hurdle.



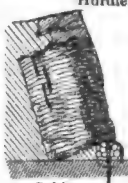
Stakes about 6 1/2 feet long.



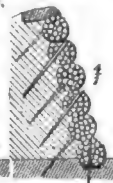
Withro.



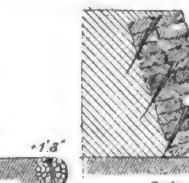
Fascine Choker.



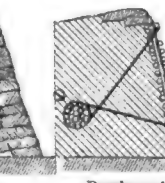
Gabions.



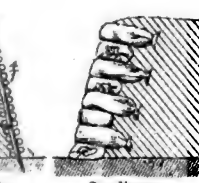
Stiff and Facines.



Sods.



Brushwood.



Sandbags.

Revetments.



Profile.



Lunette.



Field-works.

PLATE 9.

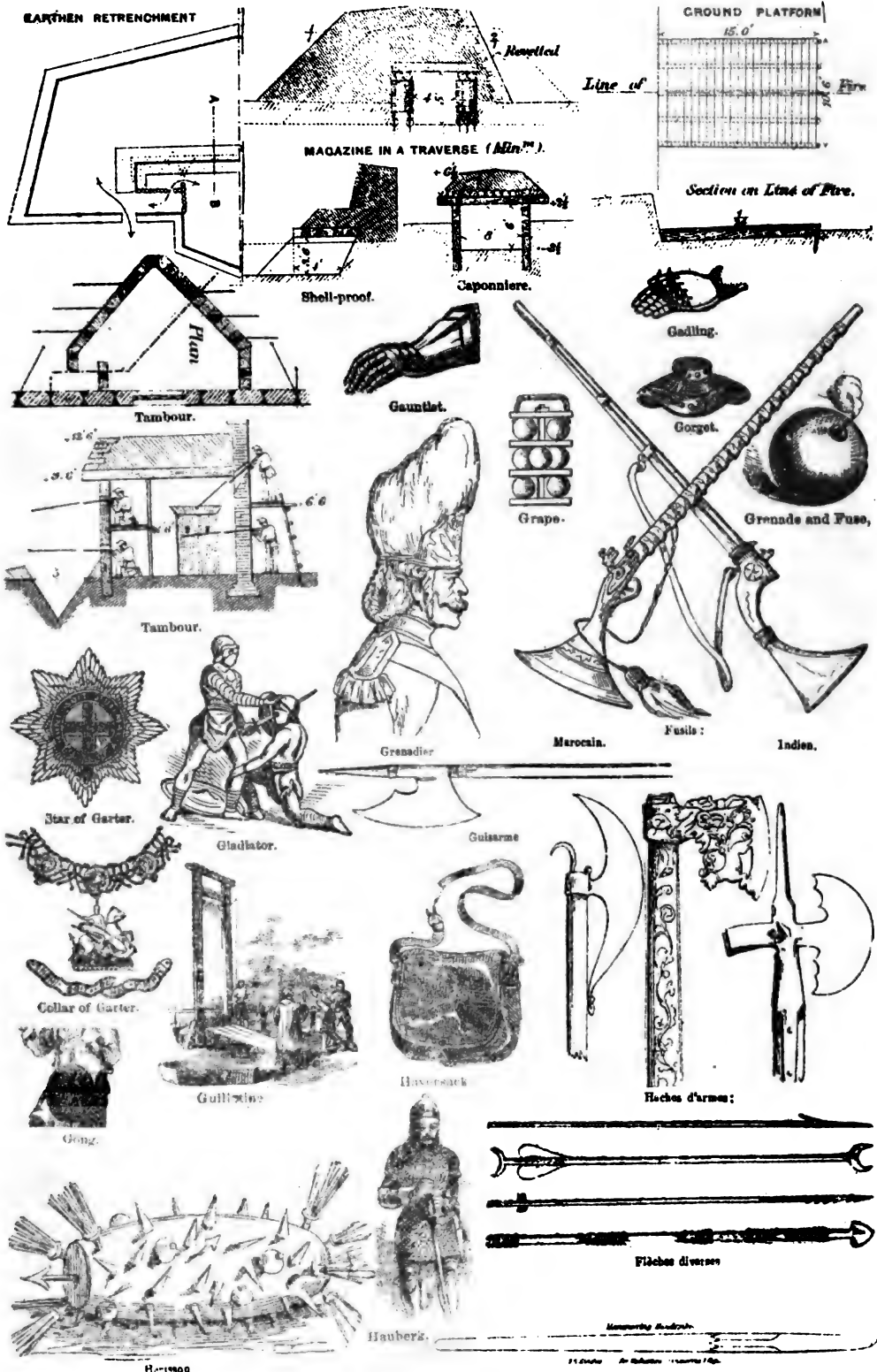
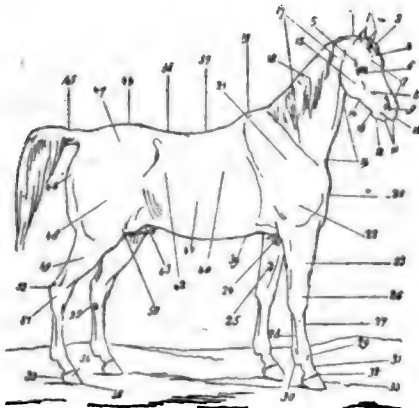
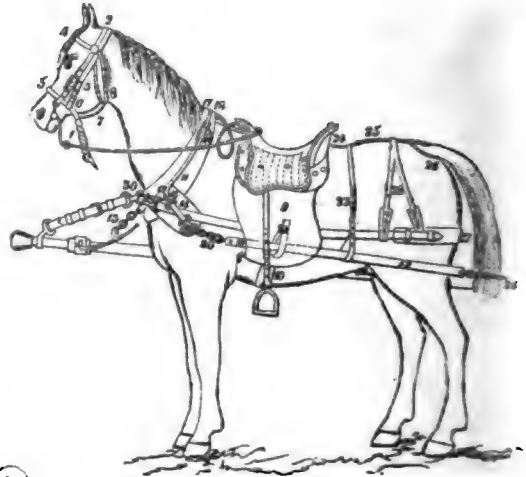


PLATE 10.

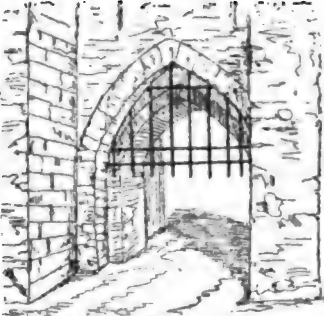


1. Ears; 2. Nape of the neck; 3. Forelock; 4. Foretop; 5. Eye-pit; 6. Eyes; 7. Face; 8. Cheeks; 9. Nostrils; 10. Tip of nose; 11. Lips; 12. Chin; 13. Beard; 14. L'auge; 15. Nether jaw; 16. Throat; 17. L'encolure; 18. Mane; 19. Withers; 20. Chest; 21. Shoulders; 22. Arm; 23. Fore-arm; 24. Elbow; 25. Cheenut; 26. Knee; 27. Shank-bone; 28. Sinew; 29. Bullet; 30. Fetlock; 31. Pastern; 32. Coronet; 33. Hoot; 34. Fetlock of the hind leg; 35. Heel; 36. Toe; 37. Back; 38. Loins; 39. Girths; 40. Ribs; 41. Belly; 42. Flanks; 43. Sheath; 44. Croup; 45. Tail; 46. Rump; 47. Haunches; 48. Thighs; 49. Leg; 50. Stifle; 51. Hook; 52. Point of the back.



Artillery Horses and Harness.

1. Halter; 2. Crown-piece; 3. Cheek-strap; 4. Brow-band; 5. Nose-band; 6. Chin-strap; 7. Throat-strap; 8. Throat-lash. Bridles, composed of Head-stall, Curbit, and Belm. 9. Near Saddle; 10. Girth; 11. Collar; 12. Harness; 13. Chin and Toggie; 14. Saddle; 15. Tracings; 16. Trussing-strap; 17. Harness-strap; 18. Collar-strap; 19. Traces; 20. Front-trace chains; 21. Rear-trace chains; 22. Trace-bugle; 23. Lion-strap; 24. Crupper, including 24. Back strap; 25. Body; 26. Dock. Breeching, including 27. Breech-strap; 28. Hip-strap; 29. Breast-strap; 30. Siding-hoops; 31. Off Saddle; 32. Hook for Reins and Valise-strap; 33. Valise. Compiling-rein. Whip, Leg-guard, and Nose-bag.



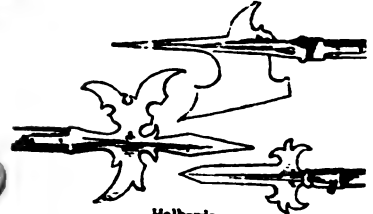
Horse.



Houqueton



Houqueton



Halberds.



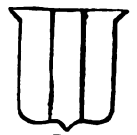
Fleur-de-lis.



Houqueton



Inescutcheon.



Pale.



Pasant.



Patee.



Passant.



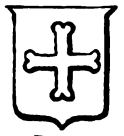
Pale.



Paly.



Party per Pale.



Pasant.



Quartered Arms.



Regardant.



Rampant.



Rampant gardant.



Rampant regardant.



Eagle regardant.



Regardant.



Respectant.



Roundel.



Sable.



Salient.



Fanciful Variations of the Shield.



PLATE II.



Lion statant,



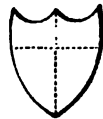
Spread-eagle,



Saltire,



Sejant,



Norman Shield, Lozenge Shield,



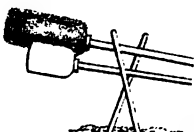
Supporters,



Surmounted,



Tressure.



Sponge and Hammer.



Springhead
Sponge



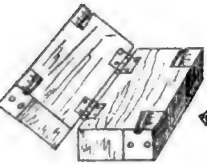
Hammer.



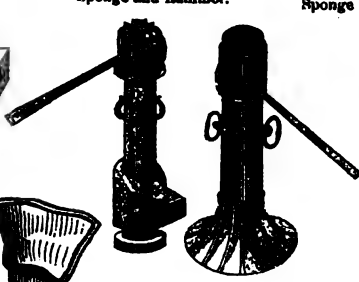
Ladle.



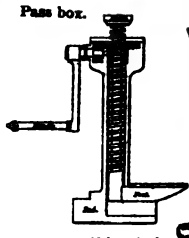
Worm.



Pass box.



Lifting Jacks.



Lifting-jack.



Jack-boot.



Capstan or
Proving-station.



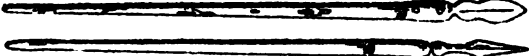
Lifting-jack.



Jambes.



Jupon.



Javelina,

EYE SPLINE

Hoisting Knot.

GRANNEY

Stap.

SHIPPER OR BARK LASHING

WARLAPPOVE HITCH



TWO HALF BITCHES.

GLOVE HITCH

BOWLINE.

SHARP SPLICING

Long Spline

ROUND TURN AND TWO HALF BITCHES.

GRANNY.

SQUARE.

SHARP SPLICING

Long Spline



POINTING.

CATSPAW.

SHEET BEND.

HUMPER LASH ROPE

CABLE LASH ROPE

SEWING

WARMING

BLACK-WALL

ROLLING.

TIMBER HITCH.

FISHERMAN BEND. STRAP.

WHIPPIT.

PARCELLING

THE RIGHT

Rolling Knot.

GARBER BEND

Anchor Knot.

A RIGHT

PLATE 12.



Lashing.



Shear Lashing.



Knight in full armor.

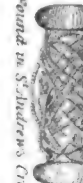


Conferring Knighthood.



Barrel Sling.

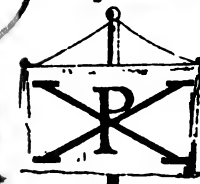
Lanyard and Handle.



Round in St. Andrew's Cross.



Hook.



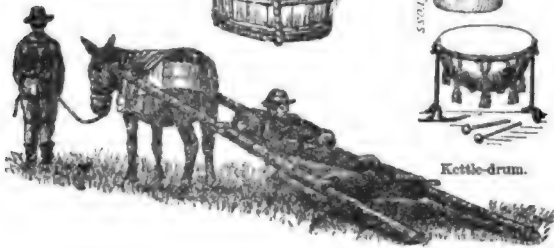
Labrum.



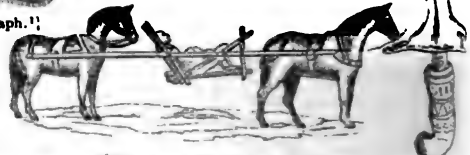
Lochaber Ax



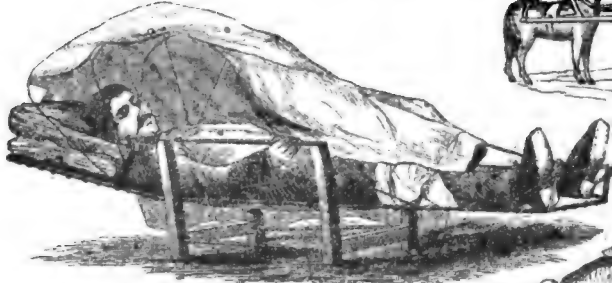
Knapsack.



Wounded soldier on a "travall." [From a photograph.]

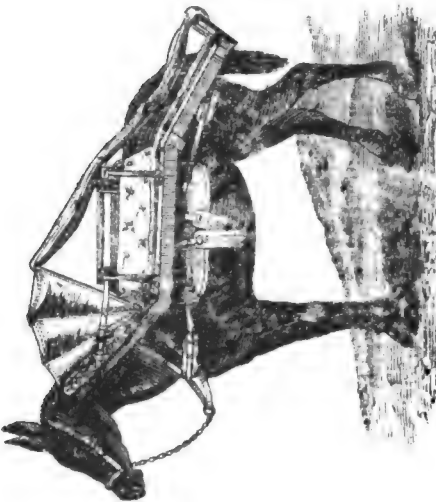


LORD and BAINES's horse-litter.



French litter unfolded.

Kris.



British army mule litter attached to its pack-saddle.



British Crimean caecolot. [After WEIR.]

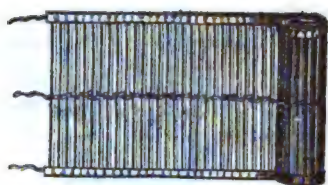


Litter of poles and raw-hide.

PLATE 13.



Wounded soldier conveyed on a double mule-litter. [From a photograph.]



Splint of willow-twigs united by buckskin thongs.



Army regulation two-horse litter. [From a sample in the Army Medical Museum.]



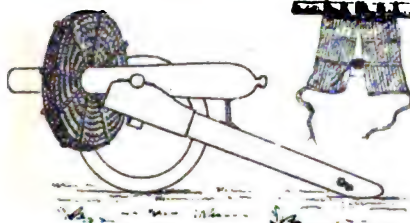
Two-horse litter of the XVI century.



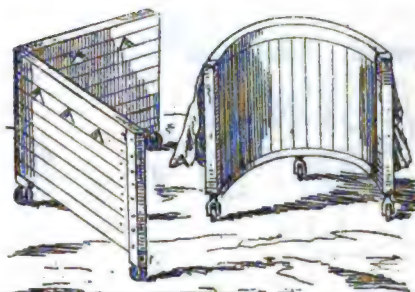
Rope MANTLET.
Front Elevation Section



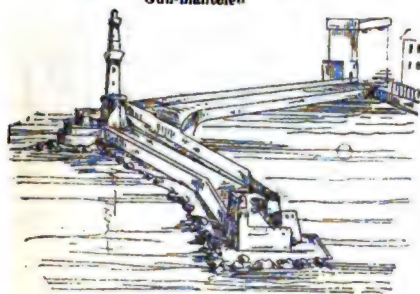
Litter.



Gun-mantelet



Mantelet ancien



Martello Tower.
(U. S. 1780.)



Martello.



Martello.



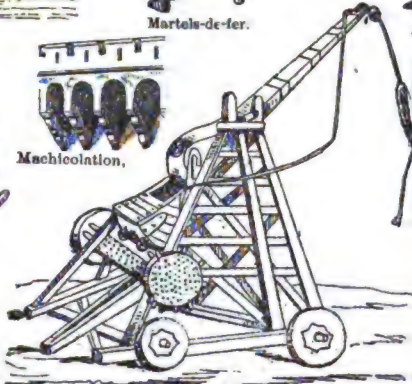
Martello.



Martello.



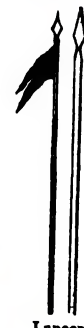
Martello.



Martello.



Martello.



Lance.



Martello.

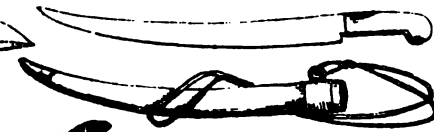


Martello.

PLATE 14.



Morteau d'armes



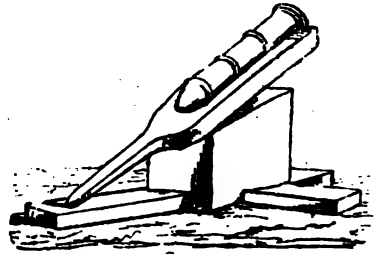
Machete



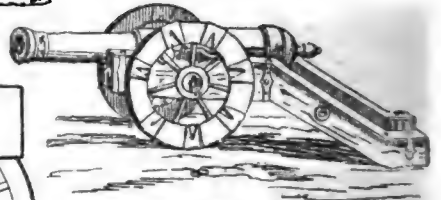
Mars.



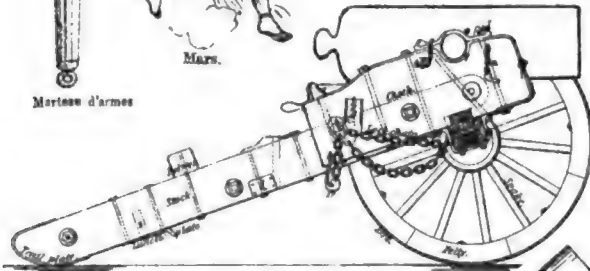
Cannon.
15th Century.



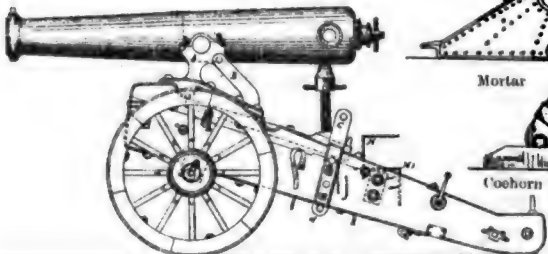
Cannon.
16th Century.



Cannon.
17th Century.



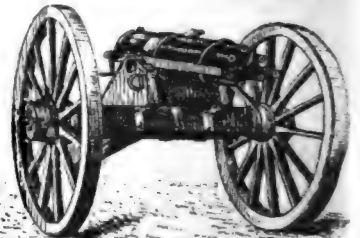
Siege Howitzer and Carriage.



Mortar



Coehorn Mortar.

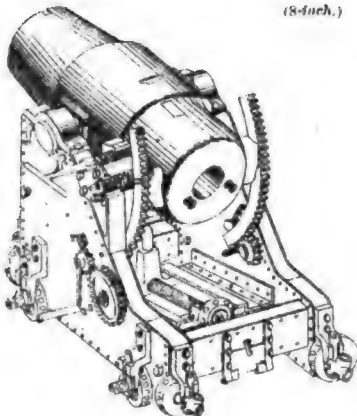


Gatling Gun

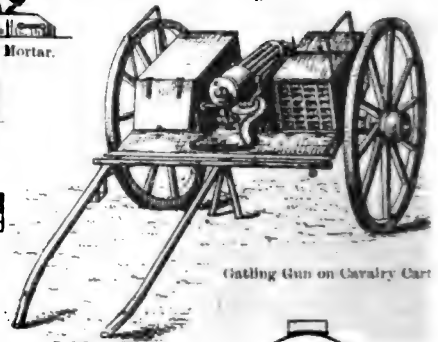


Austrian Siege-carriage.

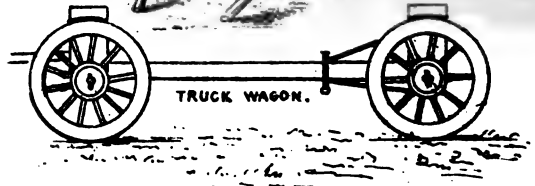
Armstrong gun.
(8-inch.)



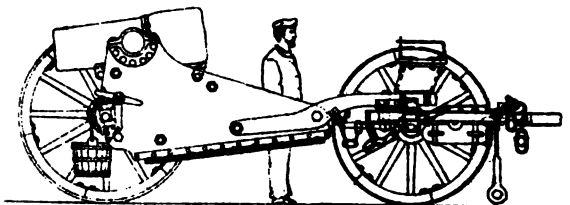
Austrian Mortar and Carriage.



Gatling Gun on Cavalry Cart

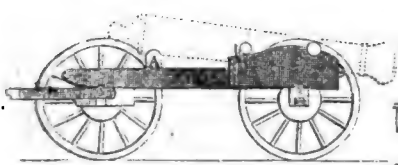


TRUCK WAGON.

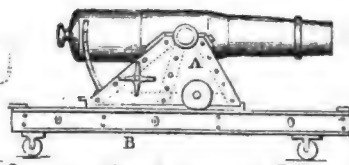


Russian Mortar.

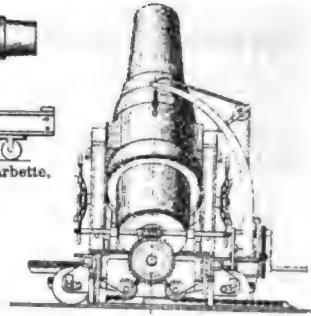
PLATE 15.



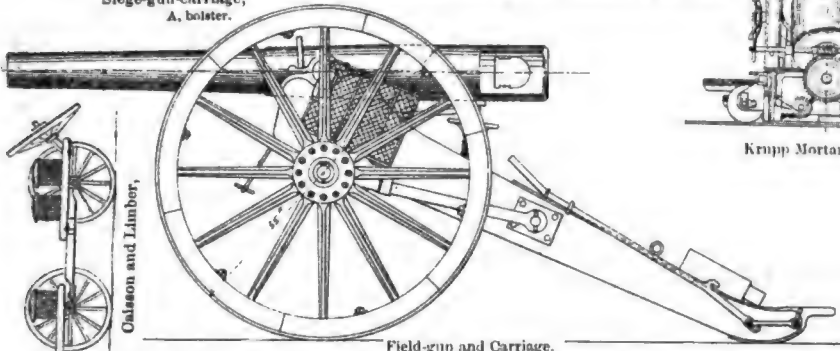
Siege-gun-carriage,
A, bolster.



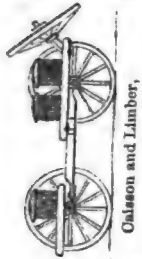
Sea-coast-carriage, for Casemate or Barbette,
B.



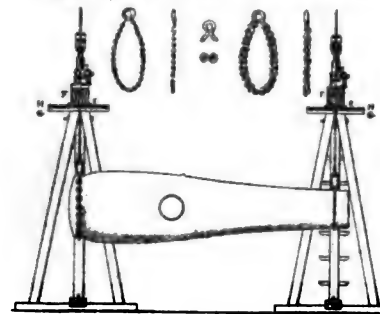
Krupp Mortar and Carriage.



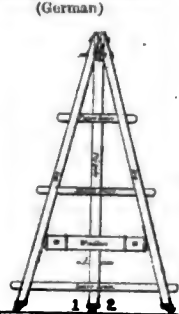
Field-gun and Carriage.
(German)



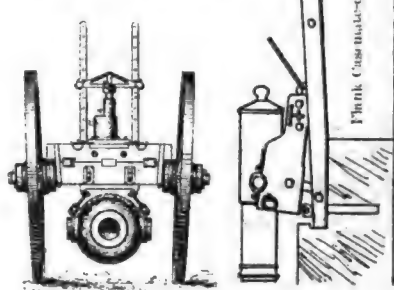
Olsson and Lamber,



Gun-lifts.

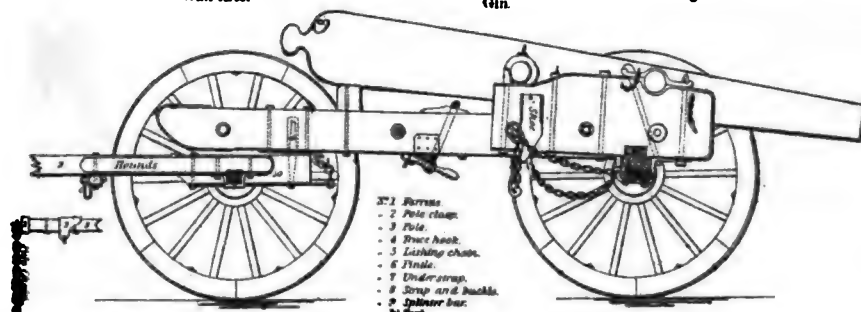


Gin.



Sling-Cart.

Plank Case made-carriage.



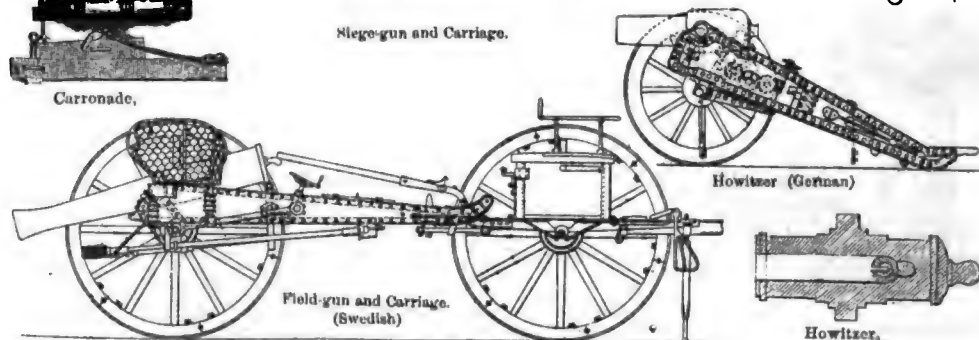
Siege-gun and Carriage.



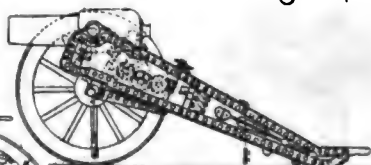
Carronade.



Casemate Truck.



Field-gun and Carriage.
(Swedish)

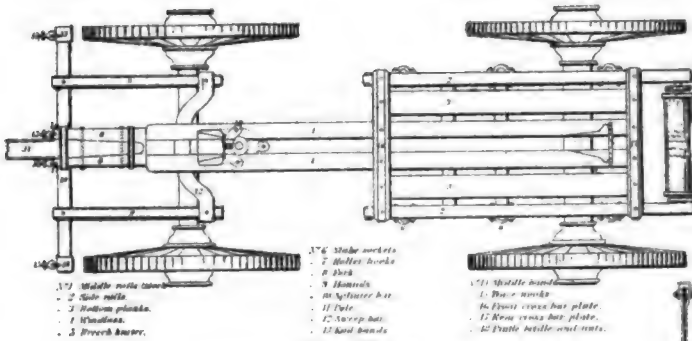


Howitzer (German)

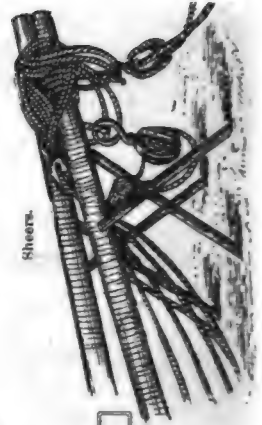


Howitzer.

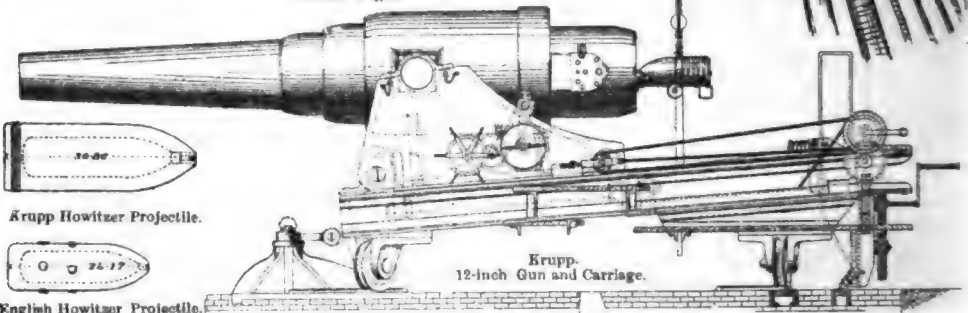
PLATE 16.



Mortar Wagon.



Shears.



Krupp 12-inch Gun and Carriage.

Krupp Howitzer Projectile.



English Howitzer Projectile.



Fixed Round Shot.



Fixed Canister.



Strapped Shell.



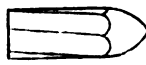
U. S. Rifle Ball.



Percussion-bullet.



Butler's Projectile.



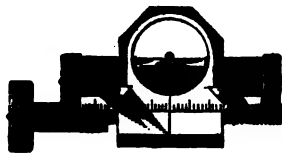
Whitworth Projectile.



Chassapot Ball.



Multiball Cartridge.



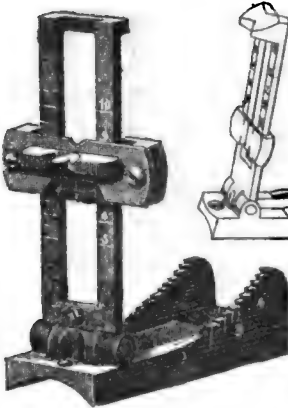
Wind-gauge (Spirit level).



Glob. Sight.



Winchester Revere Sight.



U. S. Wind-gauge and Sight.

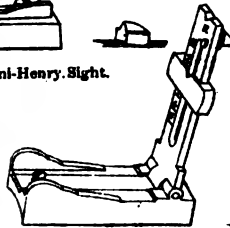


Reech Combination Sight.

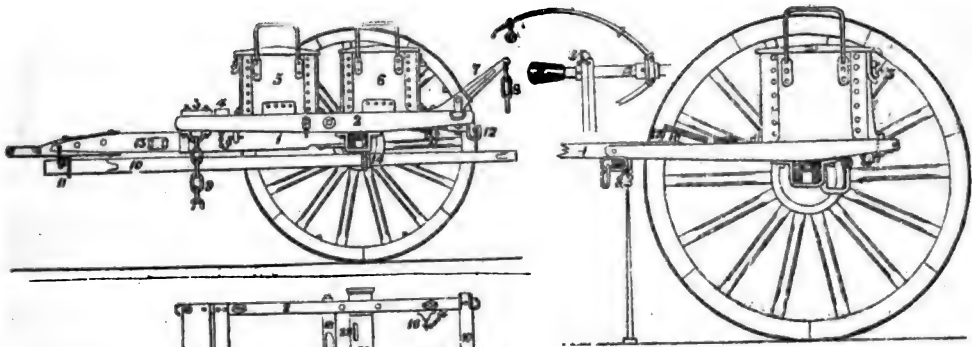


Lyman's Combination Sight.

Martini-Henry Sight.

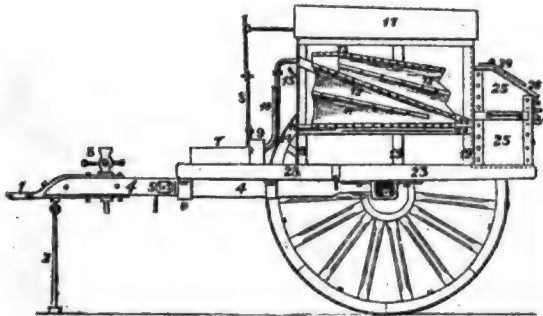


Chassapot Sight.



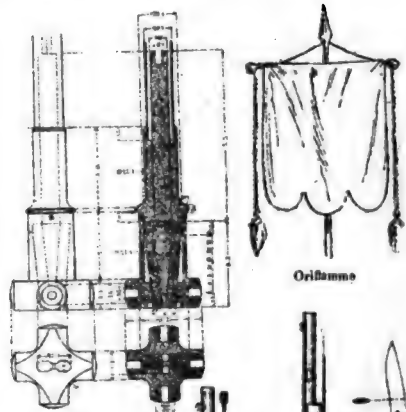
Calson and Body.

1, Stock; 2, Side-rails; 3, Front Foot-board; 4, Rear Foot-board; 5, Middle-chest; 6, Rear-chest; 7, Spare-wheel Axle; 8, Chain and Toggles; 9, Lock-chain; 10, Spare-pole; 11, Spare-pole Key; 12, Plate, Chain, and Pin; 13, Carriage-hook; 14, Wheel-guard Plates; 15, Spare-pole Ring; 16, Ring-bolt; 17, Key-plate, Chain, and Key; 18, Middle Assembling-bar; 19, Slot; 20, Rear Assembling-bar; 21, Slot Axle; 22, Axle-body; 23, Staples for Tool-handlers; 24, Wheels.



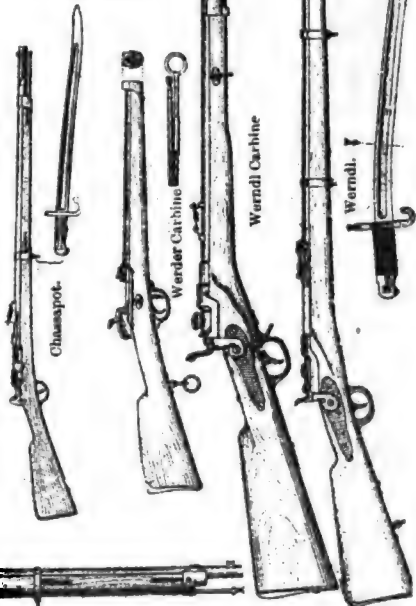
Traveling-Joke and Body.

1, Lunette; 2, Prop; 3, Vise; 4, Stock; 5, Wheel-guard Plates; 6, Stock-stirrup; 7, Fire-place; 8, Back of Fire-place; 9, Air-back; 10, Wind-pipe; 11, Bellows; 12, Ribs; 13, Hinges; 14, Hook; 15, Fulcrum; 16, Hook and Staple; 17, Roof of Bellows-house; 18, Bows; 19, Studs; 20, Girders; 21, End-boards; 22, Bottom-boards; 23, Side-rail; 24, Lock-chain Hook; 25, Coal-box; 26, Lid, or Roof; 27, Handles; 28, Hinges; 29, Turn-buckle and Flasp.



Star-gauge.

Oriflame

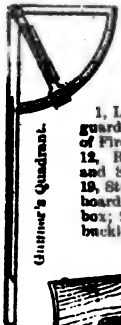


Chassapot.

Werdli Carbine.

Werdli Carbine.

Werdli.



Gunner's Quadrant.



Vitterlin.

Martini-Henry.

PLATE 18.

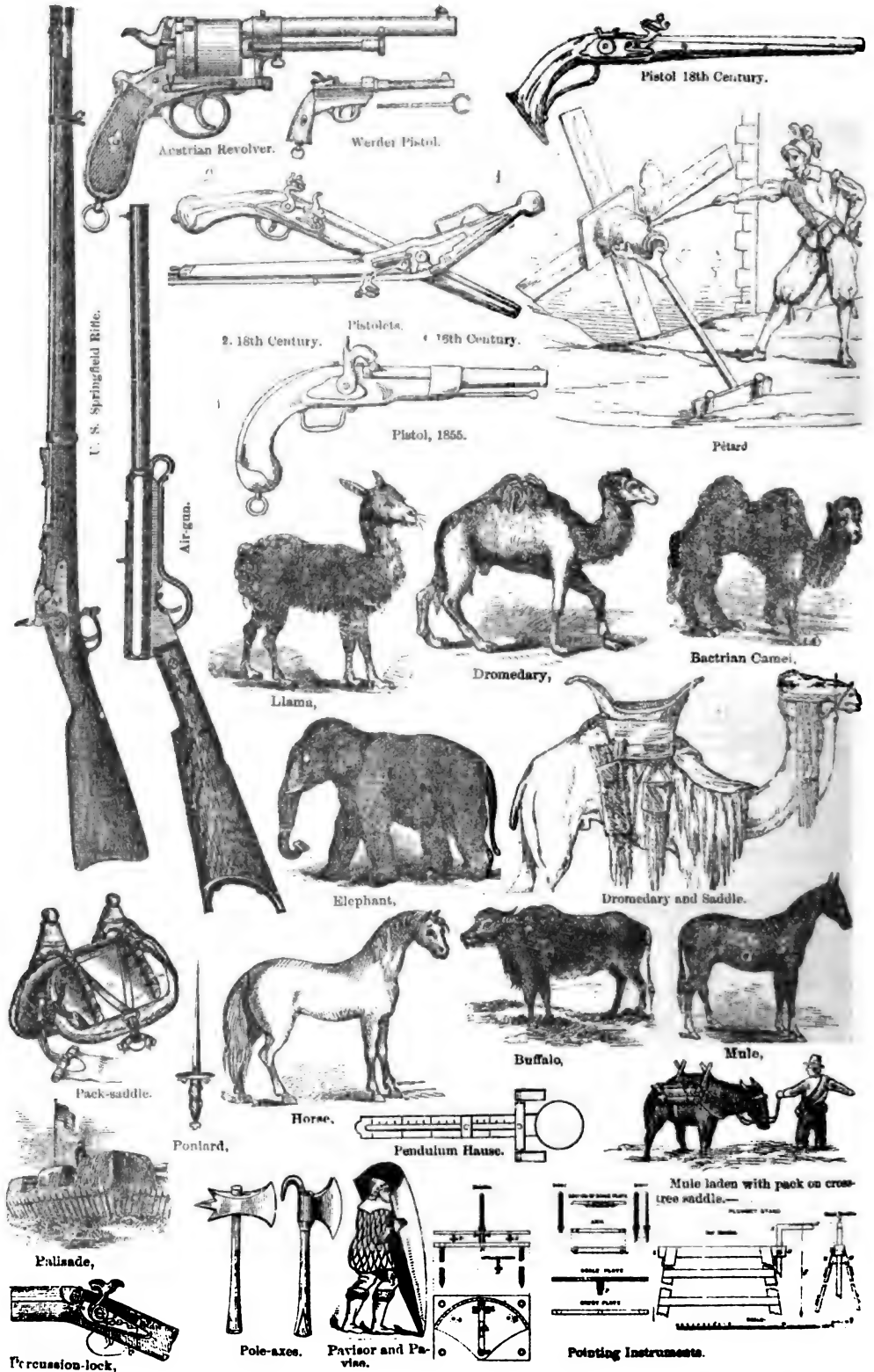


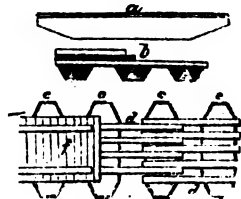
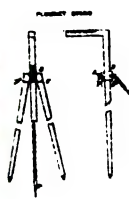
PLATE 19.



Calanet or Pipe of Peace.



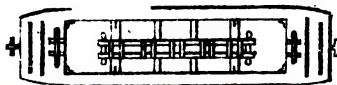
Portcullis.



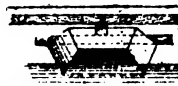
Ponton-bridge.

a, side view of pontons; b, end view of ponton joists, flooring plank and timbers fastened upon flooring; keep it in place; c, plan of pontons; d, plan of flooring joists; e, plan of flooring boards, with timbers thereon, near side of floor, to keep it in place.

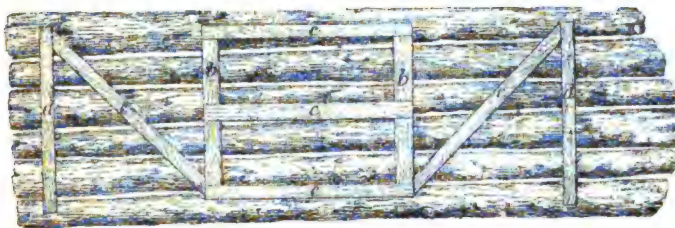
MEANS EMPLOYED IN PASSING RIVERS.



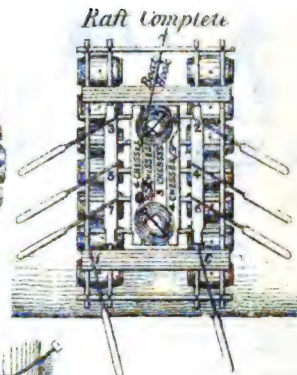
Ponton.



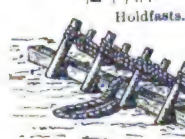
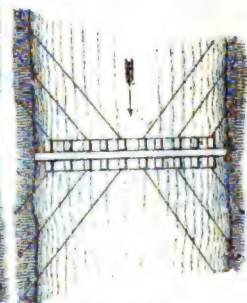
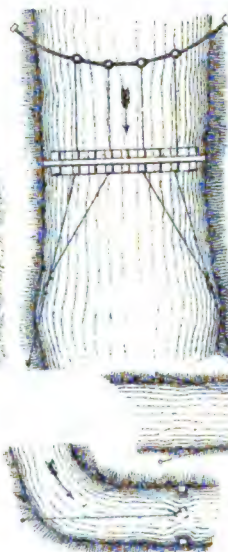
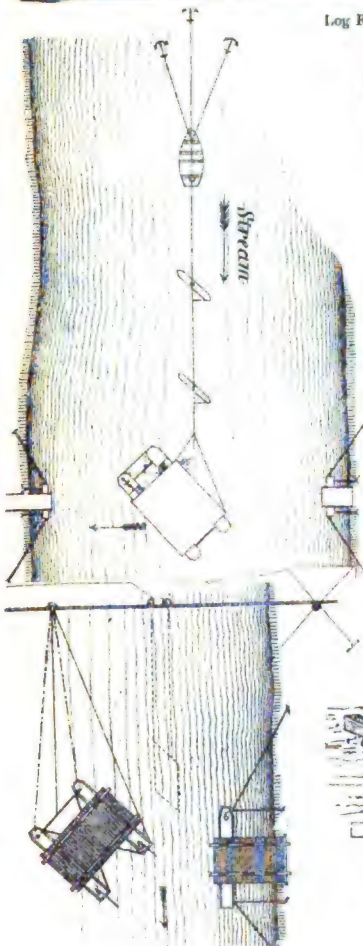
Ponton.



Log Raft.



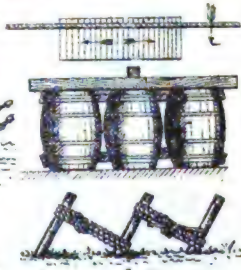
Raft Complete



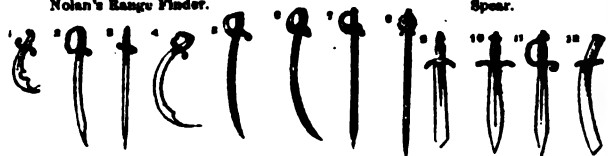
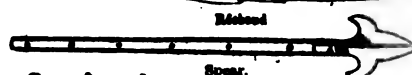
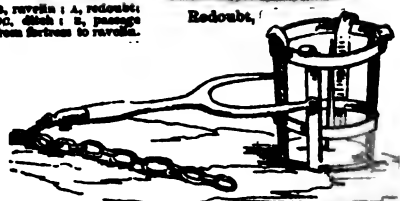
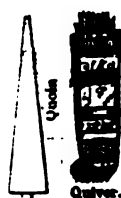
Holdfasts.



Barrel Pier



Method of lashing Barrels to Gunnels



1, Saxon sword; 2, English hanger, old form; 3, rapier, about 28 inch blade; 4, Eastern sword; 5, cut and thrust sword, 20 to 22 inch blade; 6, sabre, or cavalry broadsword, 20 to 22 inch blade; 7, heavy cavalry broadsword, 40 inch blade; 8, claymore, or Scotch broadsword, with basket hilt, 40 inch blade; 9, falchion; 10, 11, navy cutlasses, 18 or 20 inch blade; 12, half-hand, or Jossens claymore.

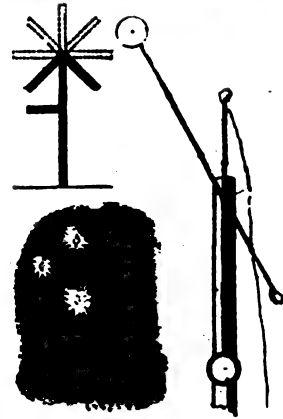
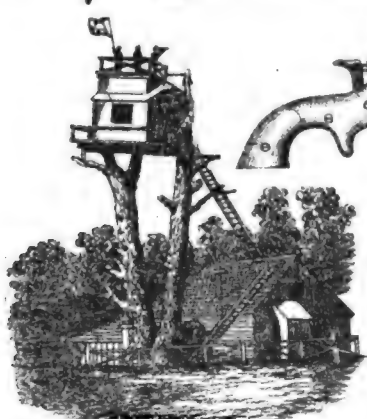
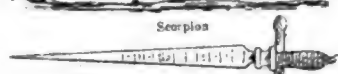
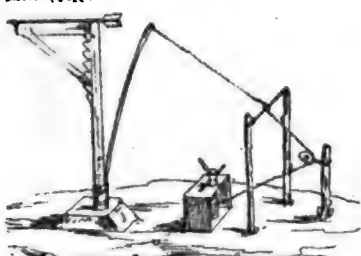
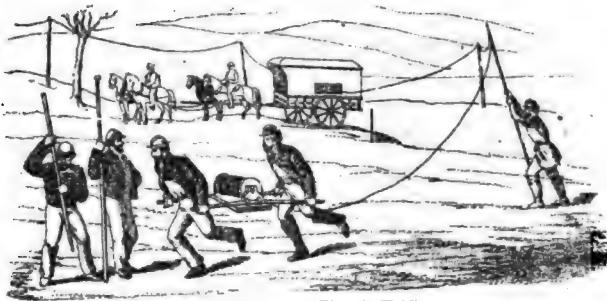
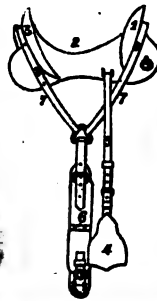


PLATE 21

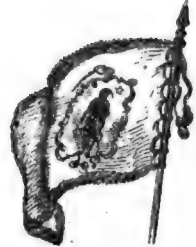


Telegraph (Electric Field).



Saddle.

1, Saddle-tree, including Pommel; 2, Seat; 3, Cantle; 4, Stirrups; 5, Stirrup-leathers; 6, Girth; 7, Girth-straps.



Standard.



Slinger.



Pasha's Standard.



Stirrup 18th Century.



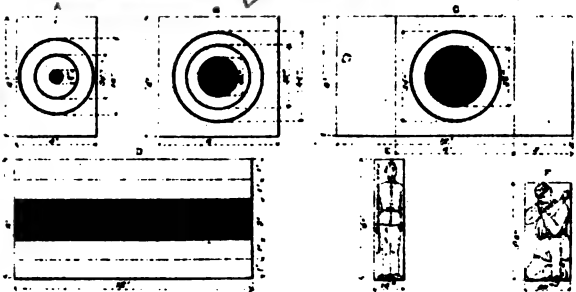
Tangent scale.



Tangent scale.



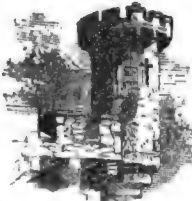
Tasset or Tasset.



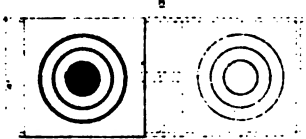
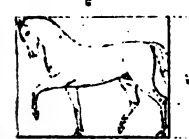
TARGETS.



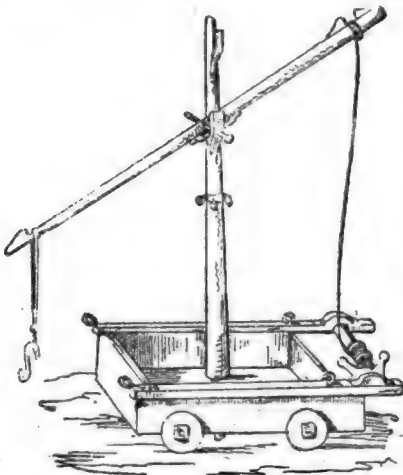
Tower.



Watch-tower.



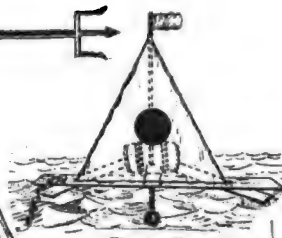
Trident.



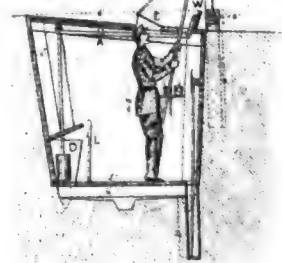
Toll-doon



Toga.

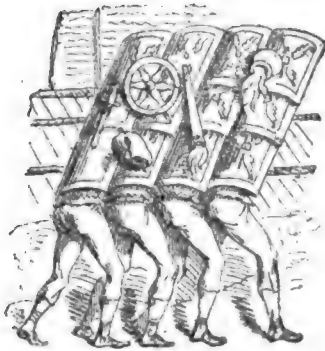


Floating Target

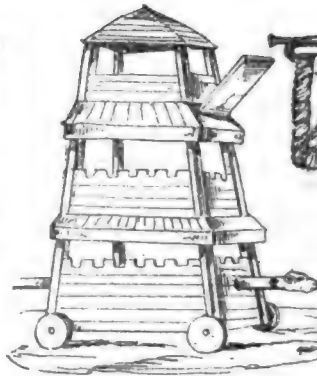


IRON TARGET. LAIDLEY'S SHELTER.

PLATE 22.



Tortue d'Hommes.



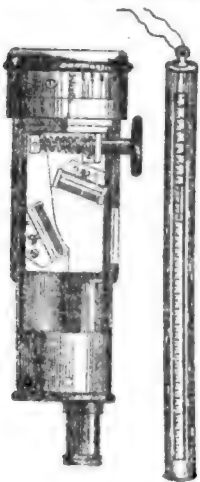
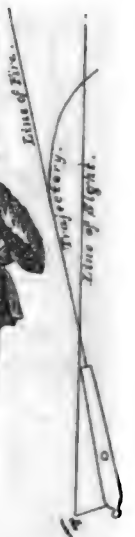
Tour bélière



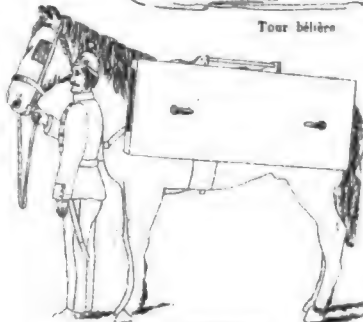
Trumpet.



Tabard.



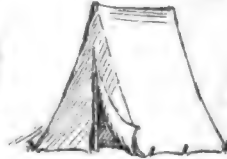
Telemeters



Telemeter
Field and mountain



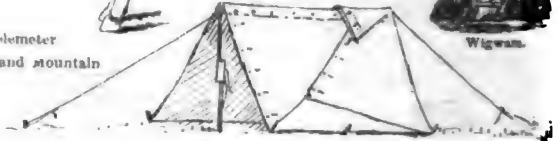
Telemeter



"A" or Common Tent.



Wigwam.



Cushing's Shelter Tent.



Pole Shut.



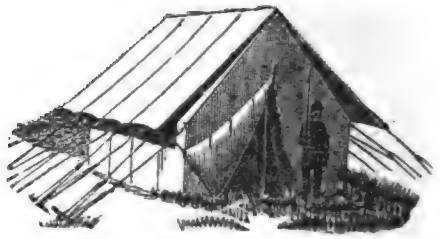
Pole Open.



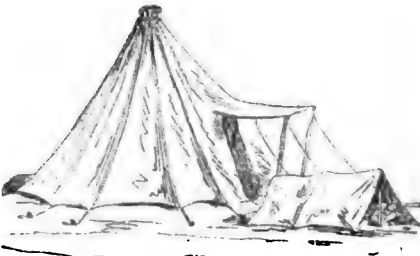
Bell Tent



Shelter Tent.



Wall Tent.



Conical Tent (France).

Tent-d'abri (France).

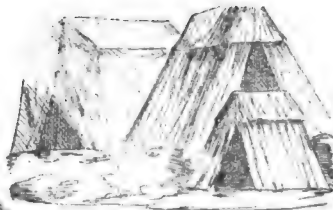


Russian Hospital Tent.

PLATE 23.



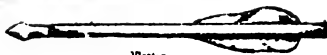
Sibley Tent.



Roman agnle.



Sibley Wall Tent.



Vireon

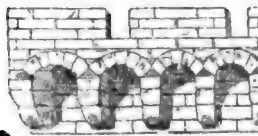


Zephr

MISCELLANEOUS.



Parahel.



Machicolation.



Vexilla.



Hand Sling Cart.



Gabionnade.



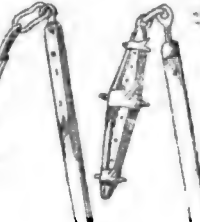
Jambiaux.



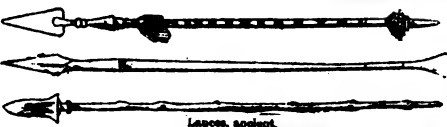
Modern.



Fleux d'armes.



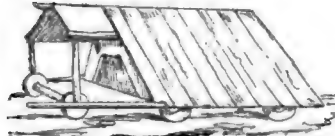
Pointing Mortar.



Lances, ancient.



Unicorn.



Musculus, 14 Century.



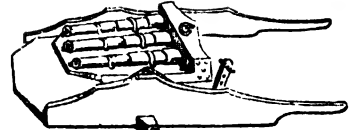
1900.



1800.



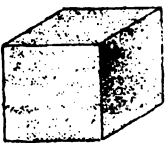
Transon.



Ribadequin.



Powder, 8-in. and 34-in. Field Rifle



Cubical Powder.



Prismatic Powder.



Hexagonal Powder.



Mammoth Powder.

MINING.

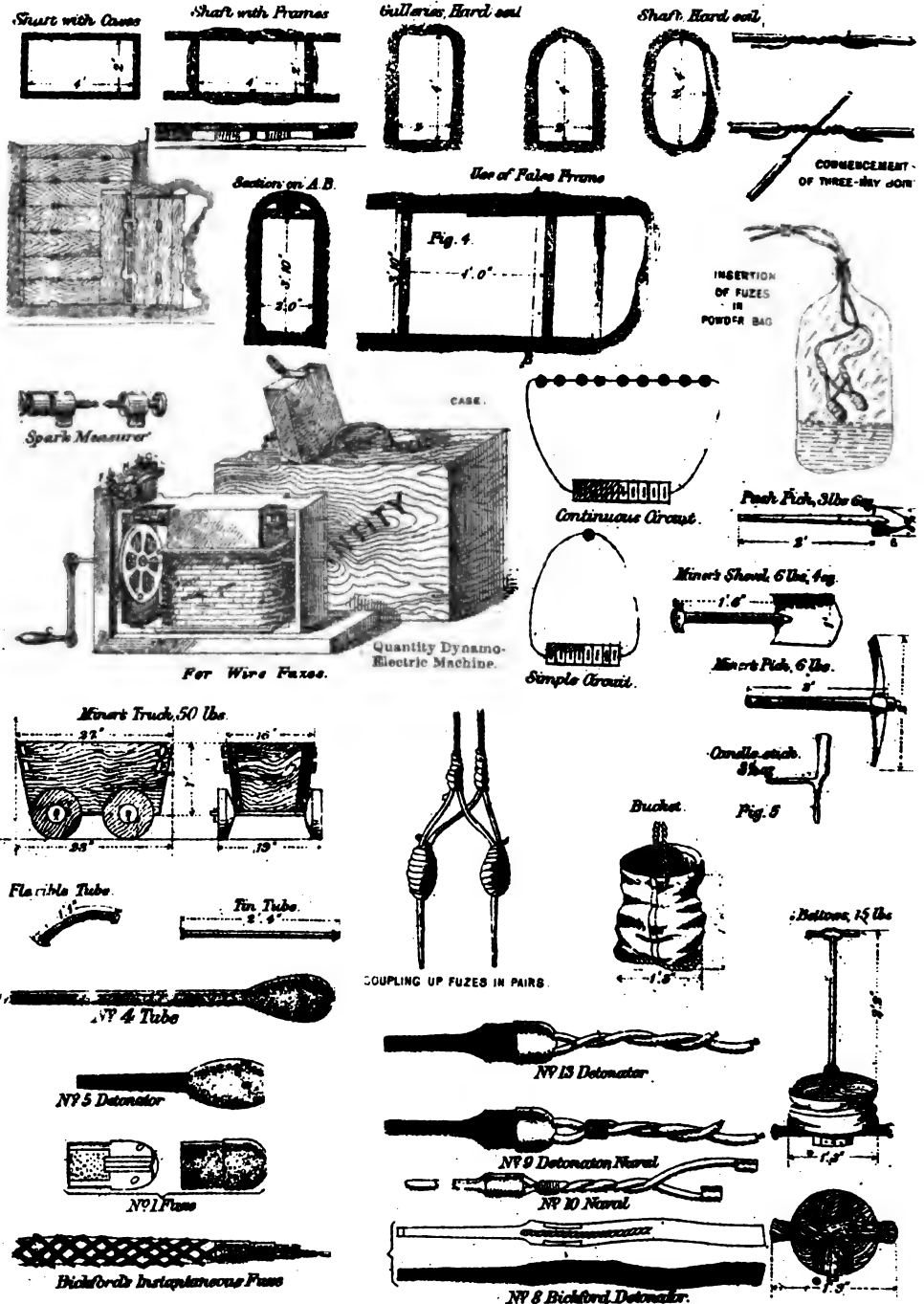


PLATE 25



Tribune, Military.
(Roman).



Legatus.



Velite.



Velite, 1567.



Joan of Arc.



Riband.



Praetorian.



Hoplite.



Arbalitrier.



Soldier Foot Legio
(Roman).



Paludamentum.



Figue.



Infantry, 1573
(Charles IX.).



Infantry (Louis XIV.).

PLATE 26.



Parthian.

Roi d'Armes.



Landsknecht.



Brigante.



Swiss Captain (1560).



Halberdier (1560).



Soldier of the "Legion Ophiota."



Borugliari.



Mimar (1700).



Vivandiere.

Cannonier (Louis XIV.).



Artificer of Artillery. 1766 (France).



Grenadier, 1690 (England).



Sapeur.

PLATE 27.



Marine of the Guard, 1804
(France).



Gendarme, Foot 1804
(France).



Zouaves (France).



Chasseur, Foot, 1802 (France)



Foot Artillery
Line (France).



Miquelet.



Tirailleur, Native
(Algeria).



Chasseur, Foot.
(Louis XV.).



Sapper of the Legion
of the Vistula.



Portuguese Legion.



Drum-major of the
French Guards
(1786).



Drum-major of the
Grenadiers of the
Guard (France
1813).



Archers, 1470 (France).



Dragoon, Sepoy.



U. S. Foot Soldier.
(1870).

PLATE 28



Chasseur (Bavaria).



Grenadier (Belgium).



Infantry of the Line (Austria).



Chasseur, Tyrolean (Austria).



Carabiniere (Italy).



National Guard (Mexico).



Scots Highlander (England).



Regular Infantry (Peru).



Fantassin of the Nizam.



Infantry of the Line (Russia).



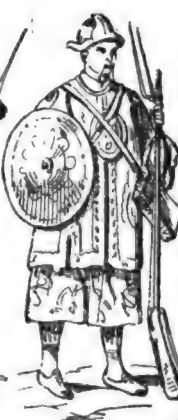
Officer of the Guard (Prussia).



Fantassin (Japan).



Infantry, Negro (Brazil).



Infantry, Tiger (China).



Infantry of the Guard (Morocco).

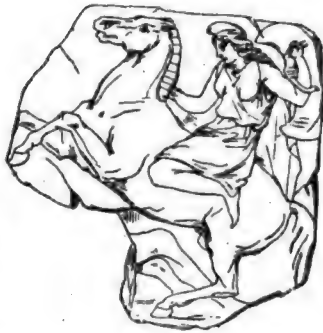


American Indian.

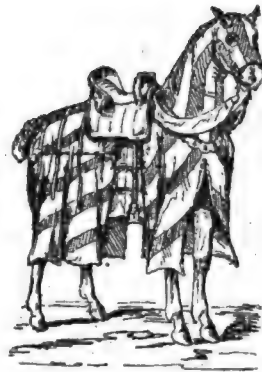
PLATE 29



Argonaut.



Amazon.



Caparison.



Homme d'Armes.
Lancer (1616).



Pretorian.



Gendarme (1488).



Roman Cavalry.



Wahabee.



Vexilla.

PLATE 30.



Hussar (Belgium),



Chasseur, Algerian



Mameluke.
(France, 1796,



Cornet of Light Cavalry
(Louis XIII.).



Kalmuck



Vivandiere,
1809 (France)



Mameluke Guard.



Spahis.



Cosack.

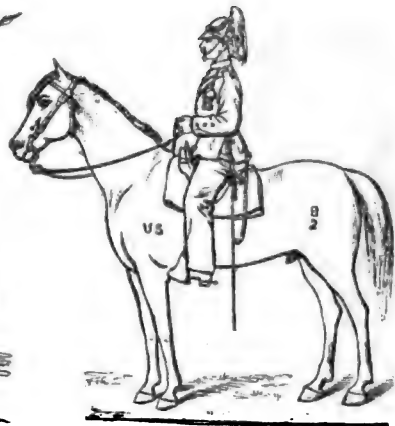
PLATE 31.



Fusilier, Mounted.
(Louis XIII.).



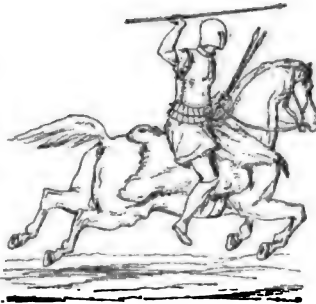
Hussars, 1746.



U. S. Cavalry.



Ban, Arriere (France)



Greek Cavalry
Ancient.



Pistolier, 17th Century.



Carabineer, Louis XIV. (France.)



Chasseurs of the Guard,
Mounted (France, 1863).



Regular Cavalry.
(Ohio).

PLATE 32



Dragoon.
(Switzerland).



Outrigger.
(Prussia).



Cavalry, 18th Century.
(France).



Guide.
(Belgium).



Lancer.
(Egypt).



Hussar (Chamberlain's).
France, 1798.

BAVARIA.



Horse Guard. (England).



Dragoon (Austria).



Cavalry. (Bavaria).

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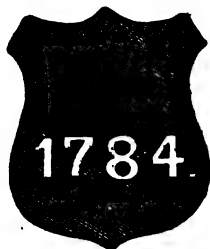
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"AM SO MUCH BETTER."

Extract from letter of a patient in Biddeford, Me.:

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FORCED CHEERFULNESS.

A patient writes:

"I used to seem cheerful, and people often remarked it; but my husband would look sad, and tell me he feared I did not feel it; which was true. (I did it to keep up his spirits.) But now it does me good to take a hearty laugh. Every one I meet says, 'How well you are looking.' I tell them it is the Compound Oxygen rebuilding me. . . . I can scarcely believe myself to be the same miserable little woman I once was."

"VICTORY!"

Under this caption, a gentleman in Iowa, who had procured the Compound Oxygen Treatment for his wife, writes:

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BRONCHITIS.

A lady in Carmel, N. Y., after using the Oxygen Treatment for about four weeks, writes as follows in regard to the result:

"Four years ago I had an attack of Acute Bronchitis. It was two or three months before I got over it, and then I had lost my voice. I could not sing. The next winter I had two attacks, and in the spring I had chronic inflammation of the throat. I was treated for it from March till June. Then my husband took me to Brooklyn for medical treatment. I got very much better; but as soon as the weather became cold I took cold, and had to stay in the house for most of the time with an inflamed throat. When I sent for the Oxygen I had just had the worst attack from which I had ever suffered. I feared that I was going to lose my voice entirely, it hurt me so to talk. Last year, every time I had a cold it left me with a pain in the lower part of my left lung. This summer the doctor sounded my lung, and said all the trouble was in the larger air passages."

"The first time I inhaled the Oxygen that pain left me in half an hour, and I have not felt it since. For two days my lung felt real good; then the inhaling made it feel sore, and every time I coughed it seemed to come from that place where the pain had been, and what I passed had a very bad taste, but did not look bad."

"I have taken a great many different things, but never in my life took anything like the Oxygen. I feel so strong and well, and have such a good, healthy appetite."

ASTONISHED AT THE RESULT.

A lady writing from Louisiana, November 15, 1880, says:

"The reception of your interesting quarterly reminds me that I have been very ungrateful to you, in not reporting progress for so long. I am not yet entirely cured, but when I think of the miserable condition I was in when, on the 7th of last February, I began the Oxygen Home Treatment, I am truly astonished at the result. I am still thin in flesh, but I believe I am still gaining ground. My health is better than in years before, and I can eat anything I can get to eat. I have a small supply of gas yet, which I use when I feel depressed. I will order another Treatment before long, for I feel sure it will eventually effect a cure. I cannot say how thankful I am for having been induced to send to you for the Oxygen."

LETTER FROM AN OLD PATIENT.

We make an extract from a letter recently received from one of our patients, which shows the permanent effects of the Oxygen Treatment:

"You will, no doubt, remember me as one of your patients of more than a year ago. I am not entirely cured, nor ever expect to be, as my business is such that as long as I am able to be about I must go. I am manager of a large grain and stock farm, and my business keeps me out of doors most of the time, which is a decided benefit to me. I have felt stronger this year than ever before, and have done ten times as much work as ever before. I still have a part of the last Treatment, which I use once in awhile when I am not feeling good, and it immediately revives me. Only this morning I had a bad headache, and felt badly; I took an inhalation of the Oxygen and felt like another man."

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